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SECRETARY OF THE AIR FORCE

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Maintenance

EQUIPMENT INVENTORY, STATUS, AND UTILIZATION REPORTING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements AFPD 21-1, ***Managing Aerospace Equipment Maintenance***. It establishes inventory, status, and utilization reporting for selected aerospace vehicles and equipment. It applies to the US Air Force, Air Force Reserve, Air National Guard, and Government plant representatives assigned to commercial contractor facilities. This instruction implements the materiel condition measurement reporting requirements of DoD Instruction 3110.5, Material Condition Reporting for Mission - Essential Systems and Equipment, September 14, 1990. In addition, it provides guidance and direction for managing aircraft and missile equipment throughout the Air Force. Major Commands (MAJCOM) and Field Operating Agencies (FOA) may supplement this instruction or the allied publications according to AFI 37-160V1. Supplements must not deviate from the basic intent of this instruction. Supplements must include unique requirements that are essential to the command. Send one copy of each command supplement to HQ USAF/ILMM, HQ AFMC/LGMM, HQ AFMC/XRWC, ANGRC/LGM, and HQ AFRES/LGM.

(AETC) AFI 21-103, 20 July 1998, is supplemented as follows:

NOTES:

1. This supplement applies to all Air Education and Training Command (AETC) aircraft, trainer, and communications-electronics (C-E) maintenance activities. **Attachment 17 (Added)** through **Attachment 35 (Added)** pertain to this supplement only and provide information needed to use this supplement. Asterisks used in attachments make up a five-digit work unit code (WUC).
2. The reporting requirement in this supplement is exempt from licensing according to AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections,* paragraph 2.11.7.

3. Maintain and dispose of records created as a result of processes prescribed in this publication in accordance with AFMAN 37-139, *Records Disposition Schedule*.
4. Recommendations for change, improvement, or waivers to this instruction should be annotated on AETC Form 1236, **Request for Improving/Changing AETC Maintenance Regulations/ Instructions.** Requests must be approved by the appropriate group commander (or squadron commander, if not assigned to a group) before forwarding to HQ AETC/LGMMP, 555 E Street East, Randolph AFB TX 78150-4440, for action by HQ AETC/LGM.

SUMMARY OF REVISIONS

This interim change (IC) 98-1 provides additional guidance for reporting aircraft maintenance status.

(AETC) This revision incorporates interim change (IC) 2001-1 which adds **Attachment 35 (Added)**, T-6 Mission Essential Subsystem List (MESL), and **Attachment 36 (Added)**, T-38C Mission Essential Subsystem List (MESL). See the last attachment of this publication (IC 2001-1) for the complete IC. A (|) indicates revision from the previous edition.

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Chapter 1

REPORTING GUIDELINES

1.1. Using Report Information . The Air Force uses the information from reports produced by each reporting system mainly for accounting and analysis. Each reporting system also gives basic historical management information and data on equipment availability and use to all levels of command. Use this information to:

1.1.1. Compute the official Air Force inventory.

1.1.2. Build the Air Force programming documents and their related budget and staffing requirements.

1.1.3. Produce statistical analysis for congressional committees, the Office of Management and Budget, and the Department of Defense.

1.1.4. Establish mission capability (MC) goals. These goals enable HQ USAF to assess resource allocation funding on a quarterly basis. The MC-rate goals and plans also go into the yearly DoD Materiel Readiness Report to Congress.

1.2. Correct Reporting. Because the Air Force uses reports named in this instruction to develop and defend the US Air Force Plan, Program, and Budget, correct and timely reporting is critical. Errors in reporting can cause the Air Force to lose needed funding, manpower authorizations, and supplies.

1.3. Offices of Responsibility. The office of primary responsibility (OPR) for this instruction is HQ AFMC/LGMM, 4375 Childlaw Rd, Ste 6, Wright-Patterson AFB OH 45433-5006. Offices of collateral responsibility (OCR) are:

- Aerospace Vehicle Inventory - HQ USAF/XPI, 1070 Air Force Pentagon, Washington DC 20330-1070.
- Intercontinental Ballistic Missile Status - HQ AFSPC, 150 Vandenberg St, Ste 1105, Peterson Air Force Base CO 80914-4470.
- Aerospace Vehicle Utilization - HQ USAF/XOFP, 1480 Air Force Pentagon, Washington DC 20330-1480.
- Aerospace Vehicle Status - HQ USAF/ILMM, 1030 Air Force Pentagon, Washington DC 20330-1030.
- Communications-Electronics (CE) Status and Inventory Reporting - HQ AFCA/SYYM, 203 W. Losey St., Room 3065, Scott Air Force Base IL 62225-5234.

1.4. Allied Publications. For personnel to carry out the procedures in this instruction, Functional User manuals must include:

- Detailed rules for filling out the forms.
- Instructions for data entry.
- Report formats.

Chapter 2

AIRCRAFT, DRONE, AND REMOTELY PILOTED VEHICLES (RPVS)INVENTORY, STATUS, AND UTILIZATION REPORTING

Section 2A—Reporting System Overview

2.1. Concepts.

2.1.1. Each aerospace vehicle is the possession of an Air Force unit or depot. The possessing unit or depot reports:

- The hours it possesses the aerospace vehicle.
- Changes in aerospace vehicle possession.
- Status conditions that affect an aerospace vehicle's ability to perform assigned missions.
- Flying hours and sorties.

2.1.2. If a contractor controls or maintains an aircraft that needs inventory, status, and utilization reporting, the administrative contracting officer must submit the needed reports or information to the agency that asks for them, unless the applicable contract states otherwise. Use these reports whenever it is in the best interest of the Government.

2.2. The Reporting System . Units process inventory, status and utilization data using a Maintenance Management Information System (MMIS). MAJCOMs, Field Operating Agencies (FOAs), HQ AFMC, HQ USAF, and other authorized users of the REMIS database check the data.

2.3. Transmitting Data. Send data collected in the MMIS at specified times over the approved communications network to the REMIS database.

2.4. Security Classification. Aircraft inventory, status, and utilization data reported under this instruction are unclassified. Do not enter classified data into the MMIS or REMIS.

Section 2B—Reporting Responsibilities

2.5. Base and Depot Level Activities. Reporting starts at base or depot level.

2.5.1. Wing/ Group Commanders or depot equivalent responsibilities:

- Ensure that personnel maintain, correct, and report all data using the procedures in AFI 16-402, ***Aerospace Vehicle Assignment, Distribution, Accounting, and Termination*** and this instruction.
- Appoint a primary and alternate AVDO to report inventory, status, and utilization for the unit or depot.
- Assign a single Point Of Contact (POC) within Operations to check the unit’s or depot's utilization and to verify flying hour inputs with the proper organization every day.
- Review reported aircraft status with the base supply POC.

2.5.1. (AETC) Bullet 2. By message, provide HQ AETC/LGMA-AVDO and HQ AETC TRSS/IDO the name, grade, duty phone, and office symbol of the primary and alternate AVDO annually at the beginning of each fiscal year and as changes in personnel occur. Recommend that the senior maintenance scheduler or civilian equivalent be appointed as the wing's AVDO.

2.5.2. Unit and Depot AVDOs:

- Are the primary POCs for aircraft inventory, status, and utilization reporting within their organization.
- Establish and publish procedures for operations and maintenance to verify the unit or depot flying hours and sorties are correct.
- Monitor and/or input data in the MMIS daily.
- Resolve any data reporting problems.
- Ensure equipment loads to MMIS for aerospace vehicles contain current operating time, equal to or greater than REMIS values, prior to performing gain transactions.
- Initiate inventory transactions and movement reports as required.
- Send out messages on time as stated in this instruction and MAJCOM supplements.
- Follow procedures stated in AFI 16-402, ***Aerospace Vehicle Assignment, Distribution, Accounting and Termination.***
- Ensure DD Form 1149, ***Requisition and Invoice/Shipping Document***, is filled out and sent as required (see **Attachment 11**).
- Distribute assigned aircraft as required.
- Coordinate with depots or contractors to report aerospace vehicle inventory changes.

2.5.3. Wing Data Base Managers:

- Monitor the receipt acknowledgment output transmittal files.
- Establish depot reporting units for depot field team reporting.

2.6. MAJCOM and FOA AVDO Monitors.

2.6.1. Utilization Monitors:

- Ensure utilization data reported by their units is correct and up-to-date.
- Resolve any reporting differences or problems.
- Ensure utilization data is coordinated between Operations and Maintenance.
- Assist MAJCOM agencies extract data from REMIS.
- Represent their MAJCOM or FOA at Headquarters AF utilization meetings.
- Verify REMIS data not later than the 25th day of each month.
- Maintain the REMIS utilization data and Aircraft Utilization/Mission Code Table for their MAJCOM as shown in AFCSM 25-524, Volume IV, ***EIMSURS Users Manual.***

2.6.2. Inventory Monitors (MAJCOM AVDOs):

- Represent their MAJCOM or FOA at AVDO meetings.

2.6.2. (AETC) The AETC AVDO's address is HQ AETC/LGMA-AVDO, 555 E Street East, Randolph AFB TX 78150-4440.

2.6.2.1. For aircraft assignment:

- Assign command aircraft based on Major Force Program authorizations.
- Work with other MAJCOM AVDOs, staff agencies, intermediate command headquarters, and specific units in assigning, controlling, and distributing aircraft.
- Assign aircraft within the command by issuing transfer instructions, which are kept on file.
- Follow up in writing any directive issued by telephone.
- Complete aircraft assignments or reassignments no earlier than 30 calendar days prior to the effective date.
- Help MAJCOM agencies extract data from REMIS to assist them in monitoring the Programmed Depot Maintenance (PDM) and modification schedules.
- Serve as the OCR for maintaining the Geographic Location Code Table, Command Code Table, Aircraft Utilization/Mission Code Table, and Organization table in REMIS, as shown in AFCSM 25-524, vol IV.

2.6.2.2. For aircraft transfer, replacement, or disposal:

- Coordinate with other MAJCOMs, Air National Guard Bureau, Air Force Reserve, and non-USAF organizations to move, ship, or transfer vehicles inter-theater and to file applicable movement reports.
- Provide technical help to subordinate AVDOs.
- Provide HQ USAF/XPI, HQ USAF/XPP, and concerned countries assistance in replacing and disposing of aircraft allocated to the Security Assistance Program (SAP).
- Work with transferring units to choose aircraft serial numbers to meet T.O. 00-20-1, ***Preventive Maintenance Program*** configuration requirements.

2.7. HQ AFMC.

- Is the Air Force AVDO.
- Collects and checks data reported under this instruction.
- Keeps the master Air Force assigned aircraft inventory up-to-date as stated in AFI 16-402, ***Aerospace Vehicle Assignment, Distribution, Accounting and Termination.***
- Is the OPR for REMIS' Geographic Location Code Table, Command Code Table, and Organization Table.

2.8. Contract Administration Activities (Except Contract Field Teams). Report all gains, losses, and terminations as stated in either this instruction, its supplements, or in accordance with maintenance contracts.

Section 2C—Aircraft Inventory Reporting

2.9. Assignment procedure. Inventory reporting starts when an aircraft is accepted according to this section and HQ USAF/XPMP initiates the first assignment procedure according to AFI 16-402, ***Aerospace Vehicle Assignment, Distribution, Accounting and Termination.***

2.10. Possession Reporting.

2.10. (AETC) See **Attachment 18 (Added)** for a list of commonly used possession purpose codes with their level of authorized use.

2.10.1. What To Report as Possessed Inventory:

- All US Air Force-owned aircraft, including those on loan or leased to agencies outside the US Air Force.
- Non-US Air Force-owned aircraft as directed by HQ USAF.

2.10.2. Procedures. When a unit or depot gains or loses possession of an aerospace vehicle, the unit or depot must:

- Start or stop possession reporting.
- Coordinate the gain/loss time of transfer with the reciprocating unit.
- Inform the base/depot engine manager of all aerospace vehicle losses, gains, and terminations.

2.11. Criteria for Gaining or Losing Possession. Possession of an aircraft changes when:

2.11.1. The flight crew of the gaining organization accepts and leaves with the aerospace vehicle unless otherwise stated in an inter-command MOA. The time of possession change is the actual time the aircraft takes off from the losing organization. For aircraft moved in a "PJ" purpose identifier, the possession changes at the time the Traffic Management Office (TMO) of the gaining organization accepts the aircraft.

2.11.2. The flight crew of the losing organization, or a neutral flight crew, delivers the aircraft. The time of possession changes when the engines shut down at the gaining base.

NOTE: The Air Combat Command Air Operations Squadron ACC/AOS air crew is considered a neutral crew if they do not come from the losing or gaining unit.

2.11.3. An aerospace vehicle is damaged or destroyed. In this event:

- The nearest base with the necessary repair or reclamation capability takes possession. The time of possession change is the time of landing or crash.
- Possession does not change if the parent organization does the repair, reclamation or termination, however the unit AVDO must initiate the proper station location code and possession purpose identifier changes.

2.11.4. A transient aircraft requires maintenance lasting more than 7 calendar days. In this event:

- The organization that does the maintenance gains possession of the aircraft as soon as it's clear that the work cannot be completed in 7 days.

- Do not change possession if the parent organization does the maintenance. The unit AVDO must change the station location code and possession purpose identifier to "BL."
- Do not transfer possession for AMC aircraft in transit at bases where AMC has transient or en-route maintenance responsibility, unless depot assistance is required.
- Do not transfer possession for KC-10 aircraft unless depot assistance is required.

2.11.5. An authorized government representative accepts an aircraft from a contractor on behalf of the Air Force. In this situation:

- HQ AFMC becomes the first possessing activity for new production aircraft. HQ AFMC/LGM-AVDO processes the gain.
- REMIS automatically generates the loss of a new production aircraft in REMIS after it receives the gain transaction.

2.11.6. (Added-AETC) An aircraft assigned to another MAJCOM or AETC wing arrives or departs an AETC base for scheduled maintenance (for example, inspection or corrosion control). Use the station location code of the AETC base performing the maintenance and possession purpose identifier "BL."

2.11.7. (Added-AETC) The actual acceptance, operational use (utilization), or designation of responsibility for an aircraft changes. Aircraft transfer possession code "BT" may be used within the following guidelines only:

2.11.7.1. (AETC) Intracommand (within AETC) transferring aircraft may be possessed by losing unit in this code up to 5 workdays before the transfer date. The gaining unit may use this code up to 5 workdays after the gain date. This code will allow units time to complete pre- or post-transfer inspections and actions in a nonpossessed status. A HQ AETC/LGMA-AVDO transfer message must be received by the gaining or losing unit prior to placing aircraft in "BT" status.

2.11.7.2. (AETC) Intercommand (into or out of AETC) transferring aircraft may be possessed in this code up to 10 workdays by the gaining or losing unit. A HQ AETC/LGMA-AVDO transfer message must be received prior to placing aircraft in "BT."

2.11.7.3. (AETC) Aircraft are authorized up to 3 workdays of "BT" possession prior to input into scheduled program depot maintenance (PDM) or contract depot facility (paragraphs **2.11.7.1.** and **2.11.7.2.** do not apply), in order to prepare the aircraft for the scheduled maintenance. Aircraft returning from scheduled PDM or contract depot facility may be placed in "BT" possession code for up to 5 workdays after return of the aircraft. T-43A aircraft are authorized up to 5 workdays of "BT" possession for PDM/contract depot facility input and up to 15 workdays after aircraft return.

2.11.7.4. (AETC) "BT" time for acceptance inspections will start no later than 0700 hours on the first duty day following the aircraft transfer.

NOTE: If the gaining organization utilizes the aircraft prior to the acceptance inspection use of "BT" possession will not be authorized.

2.11.7.5. (AETC) For permanent aircraft transfers via PDM or contract depot facility, follow the guidance in paragraphs **2.11.7.1.** or **2.11.7.2.**, whichever applies.

2.11.7.6. (AETC) Units are authorized the use of "BK" possession when aerospace vehicles are being processed through a major command-directed funded and operated maintenance program.

(***For Little Rock AFB:*** The use of "BK" possession is authorized for locally directed C-130 refurbishment program.) It is not to be used when aircraft are undergoing unscheduled maintenance, (i.e., corrosion repair), scheduled inspections, or TCTOs. The following guidelines apply:

2.11.7.6.1. (AETC) The use of possession purpose code "BK" is only authorized for a total of 15 work or duty days to strip, prepare, and paint an aircraft. ***EXCEPTION:*** Little Rock AFB is authorized a total of 20 work or duty days.

2.11.7.6.2. (AETC) At any time during the painting process (see paragraph **2.11.7.6.1.**), if maintenance other than stripping, preparing, or painting is performed on the aircraft, then the aircraft will be turned to "TF" possession and the status changed appropriately. The aircraft may be returned to "BK" to complete the paint once the maintenance action has been stopped. However, the total number of "BK" days will not exceed 15 work or duty days.

2.11.7.6.3. (AETC) If more than 15 work or duty days are required by the unit, a formal message must be sent to HQ AETC/LGMTS, LGMAU, and LGMA-AVDO requesting the additional days and must include justification for the extension request and an estimated completion date. ***For Little Rock AFB:*** If more than 20 work or duty days are required, a formal message must be sent to HQ AETC/LGMTS, LGMAS, and LGMA-AVDO requesting the additional days and must include justification for the extension request and an estimated completion date.

2.11.7.6.4. (AETC) Aircraft temporarily transferred for bead blasting may remain in "BK" possession with MAJCOM approval if corrosion discrepancies are discovered which must be repaired before returning to home station.

2.11.7.6.5. (AETC) When an aircraft is transferred for bead blasting and discrepancies are discovered which must be repaired before returning to home station (other than corrosion discrepancies), the aircraft will be placed into possession purpose code "TF" and the status will change from FMC to the appropriate status.

2.12. Criteria for Terminating Possession. Possession terminates at the time the aerospace vehicle meets the termination requirements of this instruction, AFI 16-402, ***Aerospace Vehicle Assignment, Distribution, Accounting and Termination***, and the Air Force Data Dictionary. Terminate the aerospace vehicle and cease reporting if it has permanently transferred to non-Air Force activities such as:

- Foreign countries, as applicable.
- Other DoD agencies, such as US Army or US Navy.
- Other Government agencies.

2.13. Criteria for Reporting Aircraft as Deployed. When sending aerospace vehicles for use at other locations or for specialized maintenance (other than that done by a depot), list such movements and their possession accountability according to the criteria contained in paragraphs **2.13.1.** through **2.13.5.**

2.13.1. Satellite Operation and Detachment. An aircraft is in a satellite operation or detachment when it is moved to another station but the parent command unit continues to operate and support it.

NOTE: Do not change possession accountability unless directed by an Operation Plan (OPLAN). The command of possession is that command to which the flying hours are allocated.

2.13.2. Rotations. An aircraft is on rotation when direct responsibility for its operation or support changes between CONUS or overseas activities, commands, or units.

2.13.2.1. Since the flying hours are allocated according to PA documents, MAJCOMs may not change possession accountability unless the host organization is within their own command.

2.13.2.2. When the aircraft moves as a part of a total unit movement that will not integrate under a host control, the possessing organization stays the same or changes as stated in the OPLAN.

2.13.2.3. Change in station location may be made by MAJCOM option.

2.13.2.4. All reporting is done according to the OPLAN.

2.13.2.5. MAJCOMs must include the time of transfer in the OPLAN describing the movement.

2.13.3. Supporting Exercises.

2.13.3.1. The OPLAN must state possession accountability for aircraft moved to support intra-command, inter-command, or inter-service missions.

2.13.3.2. If the PA document uniquely allocates the flying hours or utilization for the aircraft, the command to which the flying hours are allocated is always the possessing command.

2.13.4. Consolidated or Centralized Repair Activities. When you move an aircraft for corrosion control, refurbishment, or other maintenance, normal reporting procedures apply unless otherwise directed by the MAJCOM AVDO.

2.13.5. Loaned Aircraft. Possession changes to the command and unit having direct responsibility for using and supporting the aircraft. The MAJCOM AVDOs or operational order direct the change.

2.14. Possession Reporting Criteria for Depot Teams. If an aircraft goes in for maintenance by contract or depot field teams, transfer possession according to these criteria:

2.14. (AETC) Units awaiting depot assistance will follow the instructions in paragraphs **2.14.** through **2.14.2.2.** of the basic when depot assistance conditions are encountered.

2.14.1. For field teams (depot or contract) performing maintenance or modifications, the unit AVDO reports the possession change.

2.14.1.1. Transfer possession to AFMC in purpose identifier "DJ" when the operating command receives formal AFMC acknowledgment of repair responsibility per T.O. 00-25-107, ***Maintenance Assistance,*** but before the team starts the repair.

2.14.1.2. Change possession to purpose identifier "DM" when the depot field team begins repairing (modifying or doing maintenance on) the aircraft.

2.14.1.3. Change the aircraft possession purpose identifier to "DR" only if an AFMC aircrew will perform a Functional Check Flight (FCF).

2.14.1.4. Possession returns to the proper organization if:

- The aircraft has received all assigned work and the required operational check or FCF (if part of the workload agreement)is accomplished.
- The host or operating organization receives, accepts, and controls the aircraft.

- The host or operating organization will accomplish a permanent inventory loss transaction ("TP").

2.14.2. Other Field Teams. If an aircraft receives depot field team maintenance other than stated above, the command with command control responsibilities over the team doing the work possesses the aircraft.

2.14.2.1. State these responsibilities in the workload agreement.

2.14.2.2. The unit must do the required inventory reporting.

2.15. Notifying MAJCOMs of Possession Changes.

2.15.1. Accurate reporting of possession changes is essential in order for the Air Force to accurately account for the location and use of the aircraft inventory. MAJCOMs determine procedures for reporting changes of possession within the command. Possession change messages are required on aircraft transfers between commands. For transfers between commands the reporting organizations must use the same time and date. Sections **2.15.** and **2.16.** discuss the procedures to follow.

2.16. Gain Message (RCS: HAF-LGM(AR)9480, Aerospace Equipment Possession Change Report). The unit or depot AVDO of the organization gaining the aircraft sends a priority gain message not later than the first workday after the possession changes. See **Attachment 11** for a sample gain message and instructions for preparing it. This report is designated emergency status code (ESC) C-1. Continue reporting during emergency conditions, priority precedence. Submit data requirements assigned this category as prescribed or by any means to ensure arrival on published due dates.

2.16. (AETC) Along with the addresses listed in **Attachment 11**, add the following address: OO-ALC HILL AFB UT//LIWCC//.

2.17. Loss Message (RCS: HAF-LGM(AR)9480, Aerospace Equipment Possession Change Report). The unit or depot AVDO of the organization losing possession of an aircraft sends a priority loss message not later than the first workday after the possession change takes place. On new production aircraft whose engines are tracked as outlined in TO 00-25-254-1 series publications, the Air Force program office will include engine serial numbers on the loss message. See **Attachment 12** for a sample loss message and instructions for preparing it. This report is designated emergency status code (ESC) C-1. Continue reporting during emergency conditions, priority precedence. Submit data requirements assigned this category as prescribed or by any means to ensure arrival on published due dates.

2.17. (AETC) Along with the addresses listed in **Attachment 12**, add the following address: OO-ALC HILL AFB UT//LIWCC//.

2.18. Termination Message (RCS: HAF-LGM(AR)9481, Aerospace Equipment Termination Report). The unit or depot AVDO of the organization losing accountability of an aircraft must send a priority termination message not later than the first workday after it has been decided the aircraft should be terminated. See **Attachment 13** for a sample termination message and instructions for preparing it. This report is designated emergency status code (ESC) C-1. Continue reporting during emergency conditions, priority precedence. Submit data requirements assigned this category as prescribed or by any means to ensure arrival on published due dates.

NOTE: If a losing organization has removed the engine/s from an aircraft prior to the termination due to display or storage at Aerospace Maintenance and Regeneration Center (AMARC), then the aircraft termination message must state at item 11 that no engine/s were installed on aircraft. The Engine Manager must continue to report all engines according to AFI 21-104, Selective Management of Selected Gas Turbine Engines and T.O. 00-25-254-1/-2, Comprehensive Engine Management System.

2.18. (AETC) Along with the addresses listed in **Attachment 13**, add the following address: OO-ALC HILL AFB UT//LIWCC//.

2.19. Possession Purpose Identifier Code Change Message (RCS: HAF-LGM (AR)9482, Aerospace Equipment Possession Purpose Identifier Code Change Report). When changing a possession purpose identifier, the possessing unit or depot AVDO must send a priority message not later than the first workday after the change. See **Attachment 14** for a sample possession purpose identifier change message and instructions for preparing it. This report is designated emergency status code (ESC) C-1. Continue reporting during emergency conditions, priority precedence. Submit data requirements assigned this category as prescribed or by any means to ensure arrival on published due dates.

2.19. (AETC) When the possession code changes, send a priority message to HQ AETC/LGMA-AVDO. Include HQ AFMC/LGM-AVDO, Wright-Patterson AFB OH, and the applicable AFMC system program director as information addressees. Only one message is required when aircraft possession is changed between AETC bases. The gaining organization prepares the message if the losing organization ferries the aircraft. The losing organization prepares the message if the gaining organization ferries the aircraft. Units are authorized to submit one AFI 21-103 possession purpose identifier code change message per day with all possession code changes for that day.

2.20. Mission, Design, Series (MDS)/Configuration Identifier Change Message (RCS: HAF-LGM(AR)9483, Aerospace Equipment MDS/Configuration Identifier Change Report). The AVDO of the organization changing the MDS or configuration identifier must send a MDS/configuration identifier change message. Obtain proper authorization from the MAJCOM AVDO before making the change, and send a priority message not later than the first workday after the change. See **Attachment 15** for a sample MDS/Configuration identifier change message and instructions for preparing it. This report is designated emergency status code (ESC) C-1. Continue reporting during emergency conditions, normal precedence. Submit data requirements in this category as prescribed, or as soon as possible after submission of priority reports.

2.21. How To Determine Codes. **Attachment 4** lists the references used in inventory reporting under this instruction.

Section 2D—Aircraft Logistics Status Reporting

2.22. Reporting Maintenance Status. The reporting requirements in this section are exempt from licensing in accordance with paragraph 2.11.3 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

2.22.1. Use multiple status reporting to the extent practical.

- Multiple Status meaning an aircraft can be broken for more than one condition at the same time.

2.22.2. MAJCOMs may choose which aircraft possession purpose identifiers to use in computing and developing rates and standards for individual organizations.

2.22.2. (AETC) Access Core Automated Maintenance System (CAMS) transaction identifier, possession identifier inquiry (PII), AFCSM 21-564, Volume II, *Status and Inventory Reporting*, for an online display of available possession codes. The PII lists codes used in computing equipment possession time and categorizes possession code used in computing reportable equipment status.

2.22.3. ALCs do not have to report status.

2.22.4. (AETC) Status reporting for ground training aircraft is waived.

2.23. Determining Maintenance Status.

2.23.1. **Attachment 2** gives a list of maintenance and status codes and their definitions, which are based on DoDI 3110.5. These codes describe the capability of an aerospace vehicle to do its assigned missions, that is, a unit's specifically assigned wartime, training, or test missions as specified in:

- The unit's Designed Operational Capability (DOC) statements.
- Unit training syllabuses.
- Test mission requirements.

2.23.2. Report any aircraft that is not Full Mission Capable (FMC) with a maintenance status code determined by the following criteria:

- Report an aircraft that can not do all of its assigned missions as Partial Mission Capable (PMC) or any of its missions for Not Mission Capable (NMC).
- Add the letter M (maintenance), S (supply), or B (both maintenance and supply) to show the reason the aircraft is PMC or NMC.
- Aircraft in codes NMCM and NMCB also show if the needed maintenance is scheduled (S) or unscheduled (U).
- The dual status condition--Not Mission Capable Both (NMCB) or Partial Mission Capable Both (PMCB)--starts when an aircraft requires both maintenance and supplies.
- Change an existing maintenance or supply condition to the dual condition if discovering a second problem. For example, when an aircraft is in NMCM maintenance status code and then you find a supply problem (NMCS), change the reported status to NMCB.
- Change the dual condition when you have rectified either the maintenance or the supply problem. For example, if you fix the maintenance problem before the supply problem, change the NMCB status code to NMCS.

2.23.3. Scheduled or unscheduled maintenance stops when you finish maintenance according to applicable technical data using the following criteria:

- When all ground operations checks are complete.
- If in-flight operational checks are required by technical data, maintenance status will stop when all ground checks leading up to the in-flight operational check are completed.
- When you verify that a lack of parts limits the mission

2.23.3.1. If a Functional Check Flight (FCF) is required IAW T.O. 1-1-300, -6 FCF requirements, or any other applicable technical data, maintenance status will not stop until the FCF is completed.

2.23.3.1. (AETC) ***NOTE:*** Aircraft undergoing an FCF due to a maintenance requirement (scheduled or unscheduled) will be reported as not mission capable airworthy (NMCA) (flyable) until released.

2.23.4. Supply status starts after all of these actions occur:

- You find that the aircraft requires an essential part.
- You make a valid demand on supply and/or depot.

NOTE: When the Engine Manager makes a demand on depot for supported replacement engine to fill an aircraft hole for which no serviceable or repairable asset is available at the unit.

- Maintenance verifies that the part is essential.
- Maintenance and supply work together to verify that no agency on the base has the needed part.

2.23.5. Supply time stops when maintenance receives the parts. If maintenance cannot accept the parts when they are available, the supply status time stops at the time that supply receives the parts.

2.23.6. When you find an aircraft discrepancy during flight, maintenance status starts at the time the aircraft returns to its parking spot/engine shutdown.

2.23.7. When you find an aircraft discrepancy during ground operation, maintenance status starts at the time you found the discrepancy.

2.23.8. When maintenance places an MC aircraft into Planned Scheduled Maintenance, the status changes only if you determine that maintenance can not, and will not return the aircraft to a MC status within 2 hours.

2.23.8. (AETC) Planned scheduled maintenance is defined as required maintenance actions that are planned and published within the daily portion of the weekly utilization and maintenance schedule.

2.23.8.1. For example, if maintenance performs Planned Scheduled Maintenance on an otherwise MC aircraft and can and will return, or is scheduled to return, the aircraft to MC status within 2 hours, do not report it as NMC.

2.23.8.1. (AETC) Once a planned scheduled maintenance action is started and the time to accomplish the task will exceed 2 hours, code the aircraft NMC at the time the action was started.

2.23.8.2. As another example, when you find a discrepancy during scheduled maintenance that causes the aircraft to be declared NMC, and maintenance will need more than 2 hours to return the aircraft to MC status, NMC status starts when you find the discrepancy.

2.23.8.3. Aircraft entering phase, periodic, Aircraft Structural Integrity Program (ASIP), or isochronal inspections will be coded NMC using the support general WUC for the inspection. This condition should continue at least through the look phase of the inspection.

2.23.8.3. (AETC) At the time the workcards for a phase, periodic, ASIP, or isochronal inspection are initiated, the aircraft will be considered NMC.

2.23.9. Management uses certain groupings of status codes to perform summaries, analyses, briefings, and so on. These groupings show total supply and maintenance limitations. A complete list of these groupings appear in **Attachment 2**.

2.24. Pacing Items.

2.24.1. Units will report the WUC for the mission limiting condition which will take the longest for maintenance to correct on an aircraft in PMC and NMC status.

2.25. Minimum Essential Subsystems List (MESL).

2.25.1. MESLs lay the groundwork for reporting the status of aircraft capability. They list the minimum essential systems and subsystems that must work on an aircraft for it to perform specifically assigned unit wartime, training, test or other missions. The MESL brings together two lists: the Full Systems List (FSL) and the Basic Systems List (BSL).

2.25.1.1. The BSL lists a unit's specifically assigned wartime, training, and test missions and the systems and subsystems that must be working for a unit to accomplish those missions.

2.25.1.2. The FSL lists all systems and subsystems needed for Full Mission Performance. It lists the essential systems and subsystems that must be working to do all BSL missions (specifically assigned unit wartime, training, or test missions), and other kinds of unit sorties such as Program Depot Maintenance (PDM) delivery flights, aircraft transfer flights, cross-countries, or other training sorties that units fly.

2.25.2. The MESL allows you to compare the aircraft's systems, subsystems, and components, by work unit codes (WUC), against the FSL and BSL across the page. In each column, mark the equipment that must be working with an "X."

2.25.3. A system may have an "X" in the FSL column only or in the FSL column and any or all of the BSL columns.

2.25.3.1. If there is an "X" in the FSL column only, the equipment does not have any specifically assigned unit wartime, training, or test mission. The equipment may have other kinds of unit sorties or missions to fly, such as those listed in paragraph **2.25.1.2.**

2.25.3.2. If there is an "X" in the FSL column and any or all of the BSL columns, the equipment must be operational for the mission identified by the column heading.

2.25.3.3. If any system or subsystem with an "X" in the FSL column only is not working, put the aircraft in maintenance status code PMC.

2.25.4. If any system or subsystem with an "X" in the FSL and all BSL columns is not working, the aircraft cannot do any mission and gets status code NMC. If any BSL column does not have an "X" for the inoperative system the status code is PMC.

2.25.5. Determine the adverse impact of non-working components within listed systems or subsystems on a case-by-case basis. Components may appear on a MESL if the component is the only part of the subsystem that must be operational.

2.25.6. For degraded system performance evaluations, decide whether the overall system or subsystem can still support applicable mission requirements.

2.25.7. Units that possess aircraft not equipped, and/or not programmed to be equipped, with a listed system or subsystem should not report status on that equipment, unless the MESL states otherwise.

2.25.8. (Added-AETC) Minimum Essential Subsystems Lists (MESL) for AETC-assigned aircraft are specified in **Attachment 19 (Added)** through **Attachment 36 (Added)**. Operating restrictions specified in AETCI 21-101, *Maintenance Management of Aerospace Equipment,* and aircraft technical orders take precedence when determining acceptability for flight. Minimum requirements for a functional check flight (FCF) are determined by the profile required and the FCF pilot. One-time flight procedures are specified in 00-20-series technical orders.

2.25.8.1. (AETC) AETC-unique mission codes to augment AFI 21-103, *Equipment Inventory, Status, and Utilization Reporting*, Attachment 3, are located in **Attachment 17 (Added)** of this supplement.

2.25.8.2. (AETC) Each unit's training syllabus determines applicability of basic system list (BSL) columns. Qualifying note codes are used in the MESL to help explain degraded mission systems that are complex or redundant and to define aircraft exceptions.

2.25.8.3. (AETC) Send proposed changes to the MESLs to HQ AETC/LGMMP, 555 E Street East, Randolph AFB TX 78150-4440. HQ AETC/LGM is the approval authority for changes.

2.26. Developing the MESL. MESLs will be developed in accordance with AFPD 10-9. MAJCOMs must make sure that MESLs list only the minimum essential aircraft systems or subsystems that must be working in order for a unit to accomplish its mission.

2.26.1. Units can fly missions and sorties other than specifically assigned wartime, training, or test missions. Since the FSL is an all-inclusive list, build it to include all systems and subsystems on any or all BSLs and those required for sorties and missions that are not specifically assigned to that unit by the DOC, aircrew training, or flight test taskings.

2.26.2. The MESL does not portray the role that these "other" type missions and sorties may play. The aerospace vehicle status will be PMC if an inoperative system or subsystem is on the FSL only because of the limitation to full mission performance.

2.26.3. MESL BSL columns show standard mission codes that name the specific wartime, aircrew training, and test missions assigned to a unit. MAJCOMs may build and use additional unique mission codes when needed, as long as the codes are standardized within the MAJCOM. Standard MESL mission codes are listed in **Attachment 3**.

2.26.4. A sample MESL is shown in **Table 2.1.**

Table 2.1. Sample MESL.

F -15 MINIMUM ESSENTIAL SUBSYSTEM LIST (MESL)					
			FSL	BSL	
NO.	WUC	SYSTEM/SUBSYSTEM		ASY	ADC
1.	11	AIRFRAME	X	X	X
2.	12	COCKPIT AND FUSELAGE COMPARTMENTS	X	X	X
3.	13	LANDING GEAR	X	X	X
4.	14	FLIGHT CONTROLS	X	X	X
5.	23	TURBOFAN POWER PLANT	X	X	X
6.	24	AUXILIARY POWER PLANT	X	X	X
7.	41	CABIN AND AVIONICS ECS	X	X1	X1
8.	42	ELECTRICAL SYSTEM	X	X	X
9.	44	AEXTERNAL LIGHTING SYSTEM	X2	X9	X9
10.	44	B/EINTERNAL LIGHTING SYSTEM	X	X	X
11.	45	HYDRAULIC SYSTEM	X	X	X
12.	46	FUEL SYSTEM	X6	X6	X6
13.	47	LIQUID OXYGEN SYSTEM	X	X	X
14.	49	MISCELLANEOUS UTILITIES	X	X	X
15.	51	INSTRUMENTS	X	X	X
:					
:					
43.	76K	COUNTERMEASURES DISPENSER	X3	X3	X3
44.	91	EMERGENCY EQUIPMENT	X	X	X
45.	97	EXPLOSIVE DEVICES AND COMPONENTS	X	X	X

Notes:

1. Rear Cockpit Systems/Subsystems/Components Not Required To Be Operational For BSLs.
2. Manual Mode Only Required.
3. As Required By AFI 11-206, General Flight Rules.
4. When Equipped.
5. Have Quick/Secure Voice Required If Aircraft Is Modify
6. All Eight Aim-7/AIM-9 Stations Required For FMC Any Combination Of Six Required For PMC.
7. Conformal Fuel System Required When Equipped.
8. Excludes Hud Camera - 74KEO.

9. F-15B And F-15D Must Be External ECM Pod Capable.

10. Strip Lighting Required As A Minimum.

2.27. Determining Aircraft Maintenance Status and Capability.

2.27.1. The MESL does not determine airworthiness or "safety-of-flight": Technical data, maintenance crews and aircrew judgment alone determine airworthiness. Do not use the MESL to gauge "go/no-go" decisions.

2.27.2. You may fly an aircraft in maintenance status NMC Airworthy for sorties even if it is not capable of flying any of its BSL missions. (NMCK, NMCL, NMCM, NMCN,or NMCP).

2.27.3. You may deploy an NMC Airworthy aircraft as long as it can be returned to MC status (FMC or PMC) at an employment site.

2.27.4. An aircraft is FMC if:

- All systems, subsystems, and components having an "X" in the FSL column are working (the aircraft can do all missions and sorties).
- A system, subsystem, or component having an "X" in the FSL column or any BSL column is degraded but is still capable of full mission performance.

2.27.5. An aircraft is PMC if:

- One or more systems, subsystems, or components are not working and have an "X" in the FSL column only (the aircraft can do all BSL missions but is not fully equipped or capable of full mission performance).
- Systems, subsystems, or components that are not working and are not needed for unit specifically assigned wartime missions but, are needed for safe aircraft operation during peacetime (safety-of-flight discrepancies).
- One or more systems, subsystems, or components are not working and have an "X" in the FSL column and in at least one, but not all, BSL columns (the aircraft can do at least one, but not all, of its BSL missions).
- A system, subsystem, or component is degraded and has an "X" in the FSL column and all BSL columns but can support some of its BSL missions.

2.27.6. An aircraft is NMC if:

- One or more systems, subsystems, or components having an "X" in the FSL column and all BSL columns are not working (the aircraft can't do any BSL missions).
- The aircraft is "grounded" (not flyable).
- The aircraft can not fly any of the unit's BSL missions.

NOTE: The engineer at the ALC may approve the aircraft for a one time flight to a maintenance facility.

2.27.7. Use the Aircraft Maintenance Status Code Flow Chart in **Table 2.2.** to help determine the proper aircraft maintenance and condition status codes to report.

Table 2.2. Aircraft Maintenance Status Code Flow Chart.

AIRCRAFT MAINTENANCE STATUS CODE FLOW CHART		
QUESTION	**RESPONSE**	**ACTION**
A. Is the aircraft RESTRICTED from use or FLYABLE (Airworthy)?	RESTRICTED FLYABLE	NMC(Restricted - Note 1) Go to question B
B. Does a discrepancy exist against any system/ subsystem/component listed on the FSL that limits or prevents full mission performance?	YES NO	Go to question C FMC
C. Is the system/ subsystem/component identified on any BSLs	YES NO	Go to question D PMC
D. Is the system/ subsystem/component identified on all BSLs	YES NO	Go to question E PMC
E. Is the system/ subsystem/component completely inoperative or display degraded performance? (Note 3)	INOP DEGRADED	NMC (Airworthy -Note 2) Go to question F
F. Can the system/ subsystem/component still perform at least one wartime/ training/test mission?	YES NO	PMC NMC (Airworthy - Note 2)

Notes:

1. Input maintenance status code NMCM, B or, S and condition status code A through E, as appropriate, into appropriate maintenance information system.

2. Input maintenance status code NMCM, B or S, and condition status code K, L, M, N, or P, as appropriate, into appropriate maintenance information system.

3. Degraded systems are those systems that are not fully operational but work well enough to perform at least one assigned mission, or part of an assigned mission.

Section 2E—Aircraft Utilization Reporting

2.28. Aircraft Utilization Reporting Concept. Report unit or depot flying hours and sorties by Program Element Code (PEC) and mission symbol for each possessed aircraft. This data helps determine future inspection and modification requirements including the Aircraft Structural Integrity Program (ASIP) and Reliability and Maintainability Programs. CAMS data must be input no later than midnight the forth cal-

endar day of the following month. Any flying time reported after the forth calendar day will be reported in the next months data in CAMS. The reporting requirements in this section are exempt from licensing in accordance with paragraph 2.11.3 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

2.28.1. Each MAJCOM's utilization data goes into the REMIS. If the possessing unit is not in the command that was allocated the hours to be flown, the MAJCOM AVDO or the MAJCOM utilization monitor credits the hours to the assigned command by using the "L" (loan) indicator in REMIS.

2.28.2. The reporting period is based on Greenwich Mean Time (GMT). If aircraft take off after 0001Z the first day of the GMT month, report utilization for that month.

2.28.2.1. If the base or MAJCOM is reporting flying hours on aircraft at locations other than where they are possessed, the base or MAJCOM explains how to get the hours to the possessed location. The base or MAJCOM may use interim reporting means such as phone or fax. Avoid duplicate reporting when the aircraft returns to its possessed location and process the original AFTO Form 781, ***AFORM Aircrew/Mission Flight Data Document***, for records update.

2.28.2.2. When an AFMC contractor or depot field team possesses an aircraft and an AFMC aircrew will fly the FCF, the reporting base submits utilization data using:

- A "DR" possession purpose identifier.
- PEC 0702007F.
- Program Element Identification (PEID) "I" (INDIA).
- Command code “MTC” for the field team.
- Field Team organization.

2.28.3. In aircraft movements such as rotations and deployments, the MAJCOM AVDO (or utilization monitor) should consider ease of reporting and flying hour accountability in deciding whether to transfer possession to the operating location.

2.28.3.1. If the movement involves more than one MAJCOM, the AVDOs must agree on the inventory reporting changes to make sure that the utilization is reported to the desired MAJCOM. The MAJCOM AVDO issues inventory reporting instructions before aircraft movement unless the movement is urgent.

2.29. What to Report. Utilization reporting is required for all aircraft except those in possession purpose codes XU, XY, and NY.

2.29.1. (Added-AETC) Send a priority message by the 5th workday of the following month to: HQ AETC Randolph AFB TX//FMAF/LGMA-AVDO/LGXI/SEF/DORA//, 19 AF Randolph AFB TX//LGM//, and AETC TRSS Randolph AFB TX/DO//.

2.29.2. (Added-AETC) Outline the month's utilization by mission design series (MDS) as follows:

MDS	FLYING HOURS
NUMBER OF SORTIES	PROGRAM ELEMENT CODE (PEC)
CUMULATIVE TOTAL FOR HOURS	CUMULATIVE TOTAL FOR SORTIES

2.29.3. (Added-AETC) Submit utilization data to HQ AFMC for aircraft requiring FCF as a result of undergoing modification by AFMC rapid area maintenance and or contract field team. Use mission symbol O80I (letter O, eight, zero, letter I) and PEC 72007F. ***NOTE:*** It may be necessary to place a zero before and after the first seven.

Section 2F—Accountability, Termination, and Delivery Procedures

2.30. Aircraft Accountability.

2.30.1. HQ AFMC/LGM-AVDO maintains accountability on AFMC Form 1026, Aircraft Accountability Record, for all Air Force aircraft. The AF AVDO assigns voucher numbers for terminated vehicles and records them on AF Form 3131, ***General Purpose*** (used as a manual register of all assigned voucher numbers).

2.30.2. Accountability begins when DD Form 250, ***Material Inspection and Receiving Report***, is signed.

2.30.3. Account for aircraft as long as they are assigned to an Air Force, Air National Guard, or US Air Force Reserve activity. Accountability ends on receipt of a termination message and/or DD Form 1149, with termination transactions input to the appropriate MMIS.

2.31. Final Termination Accountability.

2.31.1. The possessing unit AVDO initiates termination of accountability with a termination message and inputs the termination into the appropriate MMIS if:

- Loss or disposition is due to crash damage or major maintenance beyond economical repair.
- The Air Force reclaims excess serviceable or economically reparable aircraft and processes them as surplus or foreign excess. Dispose of these aircraft according to AFM 67-1, Volume 6, Chapter 9.

2.31.2. For crash-damaged aircraft, the possessing unit AVDO sends a termination message without waiting for mishap investigation board findings when the Logistics Group Commander, or their equivalent, determines the aircraft is completely beyond repair. If the decision is beyond the Groups capability and the System Program Director's determination is necessary, the AVDO terminates possession when they receive that determination via message. The possessing unit AVDO, citing the Group Commander's decision or the SPD's message, reports using HAF-LGM(AR)9481, Aerospace Equipment Termination Report, along with MMIS input.

NOTE: Prior to terminating an Aerospace Vehicle from the MMIS archive all records.

2.31.2.1. Report aircraft wreckage that has been abandoned to the nearest Defense Reutilization Marketing Office for sale or formal abandonment.

2.31.3. The AVDO sends a copy of the termination message to the unit engine manager that has responsibility for the engines. This message gives the engine manager the authority to dispose of the engines according to AFI 21-104, ***Management of Propulsion Programs***.

2.31.3.1. After the engine manager has disposed of or terminated the engines, the unit AVDO terminates the aircraft using the applicable termination code as described in the Air Force Data Dictionary.

2.31.4. Sometimes HQ USAF authorizes the termination of aircraft that cannot be terminated using standard procedures. In such cases, the possessing unit processes the termination. Be sure to cite the HQ USAF notification as authority.

2.31.5. Disposition of aircraft historical records: After release of aircraft historical records by the accident investigating board and/or terminated from the Air Force Inventory, retain the records for three months then destroy IAW 37-139, Records Distribution Schedule, Table 21-6, Rule 3.

2.32. Delivering Aircraft to Agencies Outside the Air Force.

2.32.1. Start these assignments according to AFI 16-402, ***Aerospace Vehicle Assignment, Distribution, Accounting and Termination***. Fill out DD Form 1149 as shown in **Attachment 10**.

2.32.2. Have the recipient sign the completed DD Form 1149 as soon as the aircraft is picked up/delivered. Distribute the number of copies as shown in **Table 2.3.** within 10 calendar days.

Table 2.3. DD Form 1149 Distribution Chart.

For aircraft going to:	HQ AFMC/LGM LGM-AVDO WPAFB, OH	Copies to accompany aircraft forms binder	Totals
Foreign Countries	**Signed original**	**4**	**5**
Non-USAF activities	Signed original	2	3

2.33. Using AFTO Form 290, *Aerospace Vehicle Delivery Receipt*.

2.33.1. Use AFTO Form 290 as a record of selected equipment that will be transferred with the aircraft. The form:

- Is not required if aircraft are moved by airlift or surface transportation.
- Is used in addition to the DD Form 1149.
- Gives the delivery pilot, transporter, or recipient organizations a complete list of items they must check.

2.33.2. Use AFTO Form 290 as:

- An aircraft receipt for delivery pilots or transporters.
- A receipt for selected equipment for aircraft and as a paperwork checklist.

2.33.3. The releasing organization (such as the AVDO or AFPRO at factories, depots, modification centers, and bases) or the delivery control officer at the base where the delivery started fills out the form, including:

- The aircraft or missile model and serial number.
- Account or contract number.
- Project and priority.
- Flight Transportation Order Number when known.

- Receiving organization (organization to which the aircraft will be delivered).
- Released by (the releasing organization's unit, base, and command).
- Delivery Point (point and date of release).
- Numbers Placed on Aircraft or Missile by Releasing Organization, column B (the numbers of listed items placed on each aircraft).

NOTE: List all Confidential or Secret equipment installed on the aircraft in the space provided. Enter "none" in the "classified materiel installed on aircraft" block of AFTO Form 290 if the aircraft has no classified materiel installed.

2.33.3.1. The authorized representative at the delivering organization accepts the aircraft from delivery and accepts responsibility for paperwork and equipment listed in column B of the checklist by signing the delivery receipt in the space provided. The representative checks each item received in column C. When the check is complete, the representative initials the bottom of the column.

2.33.3.2. The delivery organization must not accept the aircraft until the items listed in column B match those on the aircraft.

2.33.3.3. If the authorized representative of the delivering organization is the pilot or transporter, fill out the AFTO Form 290 just before the aircraft actually departs.

2.33.3.4. Delivery control or transportation officers at factories or modification centers must check the items listed and sign AFTO Form 290.

2.33.4. At factories or modification centers, the delivery control or transportation officer may not have guards to keep close watch over received aircraft. Instead, a contractor, or other agency provides these services.

2.33.4.1. In these cases, the delivery control transportation office is not responsible for items listed on AFTO Form 290.

2.33.4.2. The delivery pilot or transporter of the delivery control or transportation officer must personally check all items and promptly sign a receipt for them on AFTO Form 290 in the "Transportation/Ferrying Organization Receipt" section before the aircraft departs.

2.33.5. AFTO Form 290 provides space in columns D through I for three intermediate stops. Use this space when the pilot or transporter is not staying with the aircraft and does not want to be responsible for the items on the checklist.

2.33.5.1. If the aircraft makes more than three intermediate stops, the pilot or transporter uses an additional set of forms and attaches them to the first form.

2.33.5.2. At these intermediate activities, the commanders or their authorized representatives take responsibility for the items after check-in.

2.33.5.3. The authorized activity representative and the pilot or transporter check the items immediately after the aircraft arrives.

2.33.5.4. If all items in column B match those on the aircraft, the activity representative checks the first open intermediate activity check-in column and initials the bottom of the column.

2.33.5.5. If an item is missing, the representative enters the correct figure in the check-in column. The pilot or transporter initials the corrected figure and explains the discrepancy in the remarks section of the form. After all items are checked, the activity commander is responsible for the equipment and papers.

2.33.5.6. The pilot or transporter checks the items in the checklist before the aircraft leaves. The pilot or transporter checks the proper intermediate activity check-out column and initials the bottom of the check-out column. The activity representative also initials the column. The activity representative must explain any discrepancy in the remarks section of the form, giving his or her grade and signature.

2.33.6. When the aircraft arrives, if the items in column B match those on the aircraft, the authorized representative of the recipient organization checks column J and initials the bottom of the column.

2.33.6.1. If an item is missing, the representative enters the corrected figure in column J and the pilot or transporter initials the corrected figure and explains in the remarks section of the form.

2.33.6.2. The authorized representative of the recipient organization then signs the receipt in the space provided on the form.

2.33.7. The releasing organization makes copies and sends them as follows:

- Copy 1 -- home station.
- Copy 2 -- pilot or transporter.
- Copy 3 -- recipient.
- Copy 4 -- releasing organization.
- Copy 5 -- Defense Plant Representative Office (DPRO) where the contractor facility is located, marked for the property administrator (if aircraft are delivered to the contractor facility).

2.33.8. The commands should work together to reduce the number of copies needed.

Section 2G—Reporting Assigned and Possessed Drones and Remotely Piloted Vehicles (RPVs)

2.34. Possession Reporting. The reporting requirements in this section are exempt from licensing in accordance with paragraph 2.11.5 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*. Drone and RPV reporting begins when a drone or RPV is accepted according to this section and after HQ USAF/XPI starts assignment action by sending AF Form 913, ***Aerospace Vehicle Project Action***, and an Air Force Project Number to the Air Force AVDO at HQ AFMC/LGM-AVDO. (See AFI 16-402, ***Aerospace Vehicle Assignment, Distribution, Accounting and Termination***.) The Air Force AVDO sends the information to the MAJCOM AVDO. Either HQ USAF or the MAJCOM gives assignment changes to the Air Force AVDO (according to program documents) as they happen. HQ AFMC sends MAJCOM assignment changes to HQ USAF.

2.34.1. The unit gains possession of a drone or RPV when:

2.34.1.1. They move in a "PJ" purpose identifier. The possession changes at the time the Traffic Management Office (TMO) of the gaining organization accepts the drone or RPV.

2.34.1.2. An authorized government representative accepts the drone or RPV from a contractor on behalf of the Air Force. HQ AFMC becomes the first possessing activity for a new production drone or RPV at the time it is accepted. The gain is processed by AFMC/LGM-AVDO.

2.34.2. An organization loses possession of a drone or RPV when AFMC/LGM-AVDO computer-generates the loss of a new production drone or RPV for HQ AFMC. After the organization processes the loss transaction, it updates the REMIS inventory database.

2.34.3. Termination of possession starts at the time of transfer to the non-Air Force activity on the date that the drone or RPV meets termination requirements.

2.34.3.1. A drone or RPV is terminated and no longer needs to be reported if the drone or RPV is lost from the Air Force inventory or has been assigned (permanent transfer) to non-Air Force activities such as:

- Foreign countries.
- Other DoD and government agencies.

2.35. Notification Procedures.

2.35.1. Notification procedures are the same for drones and RPVs as previously outlined for aircraft in paragraphs **2.15.** through **2.21.**

Chapter 3

INVENTORY AND STATUS REPORTING OF MISSILES

Section 3A—Reporting Intercontinental Ballistic Missiles (ICBMs)

3.1. Types of Reporting.

3.1.1. Inventory and Status Reporting. ICBM reporting includes inventory and status reporting on Minuteman and Peacekeeper ICBMs. Reporting covers ICBMs assigned to operational units by HQ USAF and MAJCOM for specific missions. Reporting begins when:

- The missile is accepted according to this section.
- HQ USAF/PED initiates the first assignment action by sending mission design series (MDS), command of assignment, missile and purpose identifier, program element code (PEC), and assignment project to the Air Force AVDO. (See AFI 16-402, ***Aerospace Vehicle Assignment, Distribution, Accounting and Termination***.)

3.1.1.1. The AVDO records this information and sends it to the MAJCOM. Either HQ USAF or the MAJCOMs provide changes to assignment data to the Air Force AVDO (according to program documents) as they occur.

3.1.1.2. HQ AFMC/LGM-AVDO sends HQ USAF assignment changes to the MAJCOM.

3.1.2. Possession Reporting. Possession is the actual acceptance or designation of responsibility for a missile. When the unit takes possession of an ICBM, the unit starts reporting according to this instruction and applicable systems instructions.

3.1.2.1. Units input all ICBM missile gains and losses into MMIS. Perform a semi-annual reconciliation of MMIS with REMIS.

3.1.2.2. Units will update the MMIS database even if they also use the Improved Maintenance Management Program (IMMP).

3.1.2.3. The unit processing the ICBM will report the gain as required.

EXCEPTION: For ICBMs transferred to Vandenberg AFB for follow-on operational test and evaluation (FOT&E) launch ("Glory Trip"), the assigned unit retains possession. The station location code is Vandenberg's (XUMU). Process a change in Geographic Location (GEO LOC) when the task force arrives and takes control of the missile.

3.2. Possession Gain and Loss Criteria.

3.2.1. An organization gains possession of a missile when the gaining organization accepts the missile.

3.2.2. An organization loses possession of the missile when the gaining organization accepts possession of the missile.

3.2.3. For missiles moved in PJ code, possession changes when the Traffic Management Office (TMO) of the gaining organization accepts the vehicle.

3.3. Notification Procedures. Use the same reporting procedures for ICBM possession changes as those spelled out for aircraft outlined in paragraphs **2.15.** - **2.21.** You may include more than one transaction in the same notification message.

EXCEPTIONS: Gaining possession messages must be sent and released the same duty day that possession changes. No airframe hours are required.

3.4. ICBM Accountability.

3.4.1. HQ AFMC/LGM-AVDO maintains accountability for ICBMs on the AFMC form 1026. The AVDO assigns voucher numbers for terminated ICBMs and records them on AF Form 3131, ***Aerospace Vehicle Voucher Register***.

3.4.2. For all missiles assigned to an Air Force activity, accountability begins when the DD Form 250, ***Material Inspection and Receiving Report***, is signed.

3.4.3. Accountability ends on receipt of a termination message and DD Form 1149 when applicable.

3.5. ICBM Condition Status Reporting.

3.5.1. Report ICBM condition status through, RCS: HAF-LGM(M)7142, ICBM Condition Status Report. Transmit this report on the tenth working day of each month. This report is designated emergency status code (ESC) C-1. Continue reporting during emergency conditions, priority precedence. Submit data requirements assigned this category as prescribed or by any means to ensure arrival on published due dates. Use the Improved Maintenance Management Program (IMMP) to record the cause and duration of every ICBM status condition

3.5.2. Report the condition status on the entire ICBM site, including:

- The missile.
- Real property installed equipment (RPIE).
- Support equipment (SE).
- Any other equipment needed for launch.

3.5.2.1. The missile launch facility designator is the governing identifier for this system.

3.5.3. Condition statues are:

3.5.3.1. FMC - Fully Mission Capable. The ICBM is capable of doing its mission (effective launch).

3.5.3.2. NMCM - Not Mission Capable Maintenance. The ICBM is not capable of launching effectively because it is awaiting or undergoing scheduled or unscheduled maintenance.

3.5.3.3. NMCS - Not Mission Capable Supply. A valid NMCS condition exists according to AFM 67-1 and maintenance work stops.

3.5.3.4. PMC - Partially Mission Capable. The missile site is capable of doing some, but not all, of its mission: It cannot achieve or maintain the full range of designed launch capability over the designed period of time, and within the designed hardness, survivability, and operational parameters.

3.6. NMCM and NMCS Time.

3.6.1. NMCM time starts when you realize that an NMC condition exists. The time stops when either maintenance finishes the repair and the missile achieves strategic alert, or when you find a verified NMCS condition. NMCM time resumes when the required supply items arrive.

3.6.2. NMCS time starts when all of these conditions exist:

- When a parts requirement affects Single Integrated Operational Plan (SIOP) capability or launch capability.
- Maintenance makes a valid demand on supply.
- Maintenance verifies the impact of the needed part.
- Maintenance and supply together verify that the needed part (serviceable or reparable and not awaiting parts) is not available on base.
- Maintenance stops work on a system, subsystem, or component because the base lacks a needed part.

3.6.2.1. The NMCS time stops when maintenance receives the supply item or items.

3.6.2.2. If maintenance can't take delivery of the item when it becomes available, the NMCS time stops at the time supply received the part.

Section 3B—Air Launched Missiles

3.7. Air Launched Missile Reporting. Only report inventory and status (gains, losses, terminations). Use the same procedures as those for ICBMs in paragraph **3.1.** and **3.2.** Semi-annual reconciliation of MMIS missile inventories is required. Accomplish reconciliation per paragraph **3.1.2.1.**

Chapter 4

TRAINER INVENTORY, STATUS, AND UTILIZATION REPORTING

4.1. Trainers Covered Under This Instruction. Air Force, Air Reserve, and Air National Guard units must report on the status, utilization and inventory of trainers listed in Air Force Data Dictionary, with ADE AE-625, ***Aerospace Trainer Reporting Designator.*** The reporting requirements in this section are exempt from licensing in accordance with paragraph 2.11.3 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

EXCEPTION: Only report the inventory of training devices maintained and supported by Contractor Logistics Support (CLS), Total Contract Training (TCT), and Air Crew Training System (ATS) concepts. Also, only report inventory of technical trainers such as Maintenance Training Sets (MTS), and Resident Training Equipment (RTE).

4.1.1. Report trainer inventory and status through the MMIS.

4.2. Responsibilities.

4.2.1. Base Activities. Units that have trainers must prepare trainer information according to appropriate MMIS users manuals and this AFI. Possessing units include maintenance, operations, Air Education Training Command (AETC) field training detachments (FTDs). The possessing unit:

- Reports inventory, status and utilization of trainers in accordance with MMIS users manuals.
- Reviews the data and corrects the errors.

4.2.1.1. (Added-AETC) Each unit appoints an OPR to establish procedures to ensure compliance with **Chapter 4**.

4.2.1.2. (Added-AETC) The resources division of the 982d Training Group is the command OPR for the overall administration and reporting of trainers assigned to training detachments (TD) and maintenance training (MAT). This OPR is authorized to prepare a listing for managing all trainers and maintain a master inventory file on trainers assigned to the TDs and MATs. The OPR sends a copy of the inventory listing to 82d Training Wing/LG, Sheppard AFB TX. Unit OPRs for trainers include the following:

4.2.1.2.1. (AETC) Maintenance authority (MA) or civil service (contract equivalent) at flying wings and training wings.

4.2.1.2.2. (AETC) Resources division of the 982d Training Group for mobile training sets used by TDs and MATs.

4.2.1.3. (Added-AETC) TDs and MATs are exempt from inputting inventory changes into the host base computer system for type 4 trainers. The MA at the 82d Training Wing will input type 4 trainer inventory changes into CAMS.

4.2.2. MAJCOMs, NGB, AFRES:

- Monitor the inventory.

- Decide whether maintenance, operations, or FTD should input the data into the maintenance information system.
- Appoint a command OPR for the reporting system who ensures the data reported is correct and up-to-date and corrects any reporting discrepancies or problems.
- At their option, use the trainer allocation subsystem to manage the command training programs.
- Make sure all command staff agencies responsible for training use their trainers according to command directives.
- Get command staff agencies to reallocate improperly used trainers to other units in the command that have a valid need.
- When the command no longer needs trainers under HQ USAF/XOOT control, request disposition instructions according to AFM 67-1, Volume I, Chapter 3, and this instruction.

4.2.3. HQ AFMC**:** HQ AFMC makes sure that the contracting documents state that the contractor must assign serial numbers to all trainers per AFM 23-110 and T.O. 43-1-1, ***Maintenance, Inspection, Storage, Shipment and Serialization - -Training Devices and Trainer Maintenance Parts Maintained by Depot***.

4.3. Trainer Equipment Designators (EQD). See the Air Force Data Dictionary, for a list of trainer EQDs.

4.3.1. Prefix the EQD with a group identification code that identifies the type of trainer by group.

4.3.1.1. For example, report:

- The F-15A mission simulator, type A/F 37AT49, , as 1BN000.
- The LGM-25C missile guidance subsystem trainer, type AN/GSM-T7 as 2NV000.
- The C-141 maintenance trainer as 40C141T.

4.3.1.2. Report trainers that do not have a related system as "multi"; for example, report instrument trainer, type A/F37AT40, as 1MULTI. Use the appropriate group of the trainer in the first digit, as shown below:

- Group 1: Aircrew trainers (instrument, flight, and mission simulators), not including cockpit procedure trainers and egress procedures trainers built by MAJCOMS other than AFMC.
- Group 2: Missile trainers (ballistic and nonballistic).
- Group 3: Navigation and electronics trainers.
- Group 4: Technical trainers such as Maintenance Training Sets (MTS) and Resident Training Equipment (RTE).

4.4. Trainer Serial Number.

4.4.1. The first four digits of the serial number for all groups of trainers are the serial number prefix for the reporting EQDs that apply.

4.4.2. AFMC assigns the last six digits of the serial number as directed in AFM 23-110 and T.O. 43-1-1, ***Maintenance, Inspection, Storage, Shipment and Serialization - - Training Devices and Trainer Maintenance Parts Maintained by Depot***.

4.4.3. A cross-reference list for group-4 trainer serial numbers assigned AF ID numbers is in T.O. 43-1-1, ***Maintenance, Inspection, Storage, Shipment and Serialization - -Training Devices and Trainer Maintenance Parts Maintained by Depot,*** table 10-1.

4.5. Reporting Criteria. Report on base-level trainers identified in Air Force Data Dictionary, ADE AE-625. Use the procedures outlined in the appropriate MMIS users manuals.

4.5.1. Units report the inventory of all groups of trainers even if they are under CLS, TCT, or ATS.

4.5.2. The basic possession purpose code for all trainers is TJ. Change the possession purpose code of a trainer in pipeline, storage, or modification, according to Air Force Data Dictionary, ADE-AE-630. Use these codes to show the status of the trainer. For example, use BT code if a trainer is:

- Being made ready for transfer.
- In transit.
- Being assembled for operation.

4.5.3. The Air Force unit monitoring trainer modification or trainers provided as either Government-Furnished Property (GFP) or on loan must report the inventory of trainers physically located at the contractor's facilities.

4.5.3.1. The Government plant representative must send a routine message to the responsible reporting unit to let them know that the contractor facility has received or shipped the trainers. Include EQD, nomenclature, serial number, and date the action took place in the message.

4.5.4. The assigned unit reports trainers that are:

- GFP.
- On loan.
- Located at a contractor's facility.
- Located at an Air Force site to support contract training programs.

NOTE: Report only inventory while it is at a contractor's facility.

4.6. Possession Gain.

4.6.1. Gain trainers, or newly reported trainers, to the Air Force inventory using the "GI" code and input the gain into the appropriate MMIS.

4.6.2. Gain Message (RCS: HAF-LGM(AR)9480, Aerospace Equipment Possession Change Report). Report with a Gain Message as called out in area **2.16.**

4.7. Possession Loss.

4.7.1. Lose trainers that you're transferring to another unit on the applicable date and input the loss into the appropriate MMIS.

4.7.2. Loss Message (RCS: HAF-LGM(AR)9480, Aerospace Equipment Possession Change Report). Report with a Loss Message as called out in area **2.17.**

4.8. Possession Termination.

4.8.1. Terminate trainers as they occur and input the termination into the appropriate MMIS. Use Air Force Data Dictionary, ADE AE-710, to choose the correct possession purpose code.

4.8.2. Termination Message (RSC: HAF-LGM(AR)9481, Aerospace Equipment Termination Report). Report with a Termination Message as called out in area **2.18.**

4.9. Utilization Reporting.

4.9.1. Report utilization data for appropriate active trainers into the MMIS.

EXCEPTION: Don't report utilization on trainers under CLS, TCT, or ATS.

4.9.2. Report utilization on multistation trainers for crew stations only. Use the mission symbols listed in Air Force Data Dictionary, ADE MI-750, to report trainer utilization.

4.9.3. The utilization time may be greater than power-on time.

4.9.4. Report only one type of training for a given time period. When you use the trainer for more than one type of training at a time, report the training that is most important. Report trainer utilization for groups 1 through 3 according to their use as stated by command directives, course control documents, or specified training plans.

4.10. Condition Status Reporting.

4.10.1. Report status changes for appropriate trainers through the MMIS.

EXCEPTION: Don't report status on trainers under CLS, TCT, MTS, RTE, or ATS).

4.10.2. Each trainer is considered fully mission capable during any 24-hour possessed time period, unless reported otherwise.

4.10.3. Report the condition status of trainers using the status codes in **Attachment 2**.

4.11. Audit Requirements.

4.11.1. At base level, the reporting unit must review the on-line audit-error reports and listings and correct the errors on-line within the specified time period.

4.11.2. At command level, the command OPRs must validate trainer data and work with the reporting units to make sure that they correct errors reported in the data system.

Chapter 5

AEROSPACE VEHICLE MOVEMENT REPORTS

5.1. What To Report. Report the movement of aircraft between units and depots or manufacturers

5.2. How to Report. Use the Aerospace Vehicle Movement Report, RCS: HAF-LGM(AR)8003, to report aircraft movements. **Attachment 6** gives a sample report, filled out according to the instructions in this chapter. The addressees and information vary depending on the reason for the report. This report is designated emergency status code (ESC) C-1. Continue reporting during emergency conditions, priority precedence. Submit data requirements assigned this category as prescribed or by any means to ensure arrival on published due dates. Use **Table 5.1.** to assist in the preparation of the report. If information is not required under a column heading, place an X in that column. Column headings and entries are:

- Column 1--AVP. Enter vehicle project.
- Column 2--MDS. Enter Mission Design Series (MDS).
- Column 3--VSN. Vehicle serial number.
- Column 4--EAV. Estimated availability date.
- Column 5--LOC. Present Location (Base name).
- Column 6--PUP. Pickup point (Base name).
- Column 7--DES. Destination/command.
- Column 8--DEP. List serial numbers of vehicles that have departed since the last report.
- Column 9--WDA. List serials numbers of vehicles that will not be available within 2 days of the earlier estimated availability date, including those released to a contractor at production facilities to fill a bailment or test requirement. Give a new estimated availability date and the reason for the delay.
- Column 10--ARR. List serial numbers of vehicles that arrived after the last report.
- Column 11--BAC. Backlog. List serial numbers of vehicles listed as available in column 4 but not departed in column 8 or not reported withdrawn in column 9.
- Column 12--TOD. List total number of vehicles departed to date on the project.
- POC-- Name, grade, and DSN.

Table 5.1. Requirements for RCS: HAF-LGM(AR)8003.

LINE	A	B											
		Required Entries											
	Type of movement/ reporting activity	AVP	MDS	VSN	EAV	LOC	PUP	DES	DEP	WDA	ARR	BAC	TOD
1	AFMC for new production & HQ USAF allocation projects	X	X	X	X				X	X	X		
2	AFMC Thursday Report	X	X	X	X				X	X	X	X	X
3	Movement between overseas & PDM	X	X	X	X	X		X					
4	Movement between PDM & bases	X	X	X	X	X	X	X					
5	Aircraft left at en route bases for maintenance	X	X	X	X		X						

5.3. When and Where to Report.

5.3.1. Send a routine message 14 workdays before departure for vehicles that you will ship or flight-deliver to or from overseas bases.

5.3.2. Send a routine message 7 workdays before departure date for vehicles that you will ship or fly between CONUS locations.

5.3.3. Send a priority message 3 workdays before departure for vehicles that are ready for delivery as last reported.

5.3.4. Send an information copy report to the gaining organization.

5.4. Reporting for New Production Vehicles and HQ USAF Allocation Projects. ALCs, contractor representatives, and officers in charge at vehicle plants and missile site installation checkout offices must send vehicle movement reports.

5.4.1. Number the reports in order, beginning with "01" for each calendar year. Place this number in the title after the RCS. Report each Thursday.

5.5. Reporting Aircraft Movement Between Overseas Bases and Program Depot Maintenance (PDM) Facilities.

5.5.1. The Air Combat Command Air Operations Squadron ACC/AOS, Langley AFB, delivers some aircraft between overseas units and depots or contract facilities in CONUS, for PDM, according to AFI 10-1101***, Operations Security (OPSEC) Instructions***.

5.5.2. Overseas MAJCOMs must report the estimated date that vehicles will be available for delivery to AFMC depots or contract facilities in CONUS to meet the next month's input schedule. Send the

report by the 25th of the month to the ALC specified in T.O. 00-25-115, ***Logistics/Maintenance Engineering Management Assignment***.

5.5.2.1. The ALC must verify the CONUS destination and notify the ACC/AOS.

5.5.3. The overseas base must notify the ACC/AOS and the ALC by message as spelled out in paragraph **5.3.**

5.6. Reporting Aircraft Movement Between PDM Facilities and Bases. After completing PDM or other maintenance, vehicle repair depots and Air Force contract administrators at contract facilities must report the estimated availability date of vehicles.

5.6.1. Submit the reports by message to the unit and MAJCOM AVDO where the vehicle is assigned.

5.6.1.1. For contractors, show the ALC as an information addressee.

5.6.1.2. If the vehicle is assigned to an overseas MAJCOM, send a copy of the report to the ACC/AOS.

5.7. Notice of Delivery Crews' Arrival. The delivery crews must notify the releasing activity by telephone of their estimated time and date of arrival. Include the name, grade, and security clearance of each crew member. Send this notice before the delivery crew leaves for pickup.

5.8. Movement Delays.

5.8.1. Releasing activities must send a follow-up message to the unit responsible for delivery (see AFI 10-1101, ***Operations Security (OPSEC) Instructions***) and send an information copy to their MAJCOM if:

- Delivery crews have not arrived within 3 workdays after the reported aircraft availability date.
- The aircraft reported earlier as available will not be available. Report the change immediately by telephone or priority message to the unit responsible for delivery. Follow-up phone calls with a message. Send a new availability date as soon as you have one.

Chapter 6

COMMUNICATIONS-ELECTRONICS (C-E) STATUS AND INVENTORY REPORTING

6.1. Purpose.

6.1.1. The reporting requirements in this section are exempt from licensing in accordance with paragraph 2.11.3 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*. Base activities enter transactions via CAMS and transmit them to the REMIS on a near real-time basis.

6.1.2. REMIS provides managers with worldwide information and the capability to extract data on in-use Air Force systems. This management information system (MIS):

- Helps managers identify trends and clear up problems.
- Helps in developing replacement systems, spare parts, and equipment modifications.
- Ensures that managers know the status on critical C-E equipment.

6.2. What is Reportable. Report all C-E equipment that is assigned a standard reporting designator (SRD) beginning with 1 through 8, B, C, E, F, J, K, Q, and U, as listed in the CAMS/REMIS SRD Table (TRIC QBC, Program NFSU10). This requirement exists even when bases are undergoing closure, systems will be reported until deactivated or the base is closed.

6.2.1. Report inventory for all equipment assigned an SRD. Exemption from maintenance data collection (MDC) requirements does not exempt the inventory requirement (CAMS reporting level P or Y).

6.2.2. Report status for all equipment (including in-garrison deployable equipment) that is authorized Mission Capability (MICAP) as indicated in the (CAMS reporting level Y).

6.2.2. (AETC) Report AETC-unique CE equipment status, using the procedures in paragraph **6.6.1.** Do not report on air traffic control device personal computers.

6.2.2.1. Equipment used for Air Logistics Centers or Central Repair Activities mockups or AETC technical maintenance training is inventory reportable only (CAMS report level T) and reported as inactive.

6.2.2.2. MAJCOM or FOA supplements may require reporting on additional equipment.

6.2.2.3. Change the equipment from active to inactive status as required. Combat Communications, tactical, and stored equipment will be reported as inactive until deployed, started up, etc. (Operating time is calculated from active times as reported on possessed inventory.)

6.2.2.4. (Added-AETC) Status reporting exceptions are:

6.2.2.4.1. (AETC) Nontactical land mobile radios.

6.2.2.4.2. (AETC) Equipment maintained by contractors, unless the job control function is responsible for contractor notification of outages or the maintenance contract specifies status reporting is required.

6.2.3. MAJCOMs, FOAs, or higher headquarters determine what mission reporting is required (CAMS reporting level Y). MAJCOM or FOA supplements define specific reporting and non-reporting requirements. See AFM 66-279, volume V, for loading procedures.

6.2.3. (AETC) Use mission reporting for local reporting only (CAMS report level R).

6.2.4. You may report local status only on nonreportable equipment or missions, provided that the reporting level is set to local only (CAMS reporting level R).

6.2.4. (AETC) The systems flight commander or chief determines the need for local mission reporting. If used, mission status reporting will not be used instead of reporting status for equipment or systems.

6.2.5. Report red and amber status of lowest level SRDs and equipment Ids. Do not downgrade status of work unit coded associated equipment if maintenance is not required for higher or lower assemblies. Refer to MAJCOM supplement of mission reporting requirements for associated equipment status reporting.

6.3. Status Definitions.

6.3.1. Green (Fully Mission Capable (FMC): Equipment/system functioning as required in T.O. specifications and capable of supporting its mission requirements.

6.3.2. Amber (Partial Mission Capable (PMC)): System or equipment functioning is such a way that it can perform at least one, but not all, of its missions/functions. (Impaired but usable.) Equipment must be at least amber when you order parts partially mission capable supply.

6.3.3. Red (Not Mission Capable (NMC)): The system or equipment doesn't meet the T.O. specifications; therefore, cannot accomplish its assigned mission or function. Unusable (neither in use nor available for use). The equipment must be red when you order parts not mission capable supply.

6.3.4. Mission status, if used, is defined in a MAJCOM or FOA supplement.

6.3.4. (AETC) Mission status, if used, will be green (FMC), amber (PMC), or red (NMC).

6.4. Security Exemption.

6.4.1. Do not enter classified status, equipment, or locations into unclassified data systems. Report as directed by the maintaining command.

6.4.2. Report AIA Command Mission Equipment (SRD category Q) as directed by AIA.

6.4.3. Report only inventory for COMSEC equipment (SRD category U). (CAMS report level P)

6.5. Responsibilities.

6.5.1. Communications Unit:

- Set up a CAMS Point Of Contact (POC) within the C-E organization to communicate between the unit, CAMS Host Data Base Manager (HDBM) and MAJCOMs or FOAs Data Base Administrators on CAMS/REMIS support issues.
- Provide assistance to the unit on all CAMS related issues IAW AFI 21-116, ***Maintenance Management of Communications-Electronics***.

- Accounts for or removes from supply records all reportable equipment end items before reporting them as gains or losses in CAMS.
- Reports status and inventory changes as quickly as possible after each event and processes them in accordance with AFM 66-279, Volume V.
- Checks the REMIS error correction file at the end of each shift and makes necessary corrections according to AFM 66-279, volume V and corresponds with MAJCOM POC on up channel reporting errors.
- Sends any REMIS errors that indicate duplicate serial number problems to the MAJCOM DBA unless otherwise stated in a MAJCOM supplement (see **Table 6.1.**).
- Processes the monthly summary report (TRIC SSR, format 1, Program NFS090) monthly to avoid losing the local summary data.
- Requests the NFS5B0 reconciliation program, AFM 66-279, Vol V be run quarterly (in demand type: @START PECLAG054-EL.RUN5B0). The exact date and time must be coordinated with the HDBM and MAJCOM DBA. Contact MAJCOM DBA when non-auto correctable errors are encountered and are beyond your capabilities to fix.
- Sets up contingency procedures to track equipment status while CAMS isn't working (downtime, communications outages, or system errors).
- When CAMS processing capability returns, updates the system on all status changes that occurred during the outage.

NOTE: The unit and MAJCOM or FOA set up rules for reporting when CAMS is down.

6.5.1. (AETC) Bullet 5. Review CAMS/REMIS KRE (error) files using CAMS transaction identification code (TRIC) REM, screen #877 (AFCSM 21-560, Volume 2, *C-E Equipment Status and Inventory Reporting*). Contact HQ AETC/SCML if you have REMIS reject errors you cannot resolve by using the CAMS/REMIS reconciliation or database auto-correction program, NFS5BO.

6.5.1. (AETC) Bullet 9. Coordinate with the base host CAMS data base manager to ensure contingency procedures will provide an efficient method to update CAMS quickly and accurately once service is restored.

6.5.1. (AETC) Bullet 11. (Added) Establish procedures allowing workcenter managers to review, validate, and correct status information in a timely manner. Ensure the accuracy of the available information at all reporting levels.

6.5.2. The CAMS HDBM:

- Transmits C-E inventory, status, and utilization data to REMIS.
- Forwards REMIS error notices to the appropriate unit for correction.
- Provides assistance and training as needed.
- Runs NFS5B0 program when requested.

6.5.3. MAJCOM/FOA DBAs:

- Give direction and guidance as needed to ensure correct and consistent reporting.
- Maintain the portion of the REMIS organization table for their command.

- Help maintain the Air Force master inventory.
- Help units to correct duplicate serial number problems (see **Table 6.1.**).
- Help units to identify and resolve REMIS error notices.
- Hold monthly reviews of downtime and delay code usage to ensure accuracy, prevent abuse, and identify new codes.
- Monitors the 5B0 transactions as they transfer to REMIS.
- Provides training to MAJCOM equipment managers on the information available in REMIS and how to extract that data themselves.
- Provides data from REMIS for special studies or assessments as requested by MAJCOM equipment managers.

6.5.3. (AETC) Bullet 4. If REMIS rejects an equipment load from CAMS because of a duplicate serial number (S/N), immediately delete the data, perform a physical verification of the part number (P/N) and S/N, and reload using the reverified data. If a second reject occurs, then delete the data and reload the equipment in CAMS. Use the following codes that correspond with the appropriate base in the first two positions of the equipment's S/N to be loaded:

Altus:	JA
Columbus:	JC
Fairchild:	KB
Goodfellow:	JG
Keesler:	JK
Kirtland	KA
Lackland:	JL
Laughlin:	JH
Little Rock:	JF
Luke:	JE
Maxwell:	JM
Randolph:	JN
Sheppard:	JB
Tyndall:	JJ
Vance:	JD

Table 6.1. Codes for the First Two Positions of a Duplicate Serial Number.

AIA	UA-U0
AFMC	FA-F0
AFRES	MA-M0
AFSOC	VA-V0
AETC	JA-J0, KA-K0
AMC	QA-Q0
ACC	SA-S0, TA-T0

ANG	ZA-Z0
AFSPC	CA-C0
PACAF	RA-R0
USAFE	DA-D0

6.5.4. AFMC:

- Ensures that C-E equipment designators are compatible with AFM 66-279 and consistent with MIL-STD 196D.
- Maintains the Air Force master inventory of serial controlled equipment.
- Notifies MAJCOMs and FOAs on changes and deletions to C-E equipment designator records.

6.5.5. AFCA:

- Acts as the Air Force focal point for C-E reporting policy and procedures.
- Helps MAJCOMs to integrate their unique reporting requirements into the Air Force System.
- Annually reviews usage of downtime and delay codes.

6.6. Status Reporting Procedures.

6.6.1. Follow the instructions for TRIC COX, Screen 996, Program NFSJR0 and TRIC EUC, Screen 997, Program NFSJQ0, in AFM 66-279, volume V. Use local time (24-hour clock) for start and stop times.

6.6.2. Unless specified in a MAJCOM supplement, you do not need to report:

- Any outage of less than 5 minutes.
- Frequency changes, crypto reset, or runway change outages that last less than 15 minutes.
- Amber conditions for scheduled maintenance.
- Adjustments or alignments performed during scheduled maintenance.

6.6.3. Use the downtime codes listed in **Attachment 7** to describe the reason for the outage. See **Table 6.2.** for a summarized breakdown of all downtime codes.

6.6.4. Use the delay codes listed in **Attachment 8** to describe any maintenance delay that is keeping the equipment from being returned to operational status. See **Table 6.2.** for a summarized breakdown of delay codes.

Table 6.2. Downtime and Delay Code Summary

-Total Downtime Codes:
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
--Maintenance Downtime:
A, B, C, D, E, F, I, M, R, U
--Scheduled Maintenance

A, B, C, D, E, I
--Unscheduled Maintenance
F, M, R, U
--Other Downtime:
G, H, J, K, L, N, O, P, Q, S, T, V, W, X, Y, Z
-Total Delay Codes:
A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z
--Maintenance Delay:
A, C, E, S
--Other Delay:
B, D, F, G, H, I, K, O, T, U, V, W, X, Z
--Supply Delay:
J, L, M, N, P, Q, R, Y
---Backorder:
L, M, N
---Local:
J, P, Y
---Other:
Q, R

6.6.5. Use ESR sequence codes to upgrade or downgrade status. Do not change the condition code on the original status unless it was wrong when loaded. Change sequence codes as needed to allow more than 26 delays or comments.

6.6.6. Input the lowest level work unit code (WUC) to identify specific components causing equipment downtime.

6.6.7. (Added-AETC) All reportable equipment and system outages will include comments that accurately describe the cause (reason) and effect (mission impact) of the equipment or system outage. Do not use anachronyms (for example, OTS-out of service) in comments to describe the outage. Do not include comments for routine PMIs. For ATCALS equipment (only), include an estimated time in-commission/estimated time to restore (ETIC/ETRO) in a comment when an NMC (red) job will not be closed the same day it was opened. For all equipment and systems, add followup comments when significant changes occur or the ETIC expires. The systems flight commander or chief may require ETICs/ETROs to be entered for other than ATCALS equipment/systems. Do not enter ETICs/ETROs in delay sequences.

6.6.7.1. (AETC) Only ATCALS equipment and systems require comments when supply transaction delay codes L, M, N, P, Q, and R are used. The systems flight commander or chief may determine other equipment or systems requiring comments to be used with supply delay codes. List supply information for each part placed on order.

6.6.7.1.1. (AETC) Comment Sequence A. Field descriptions are as follows: Nomenclature/national stock number (if available) and part number/quantity/priority/document number (less

first letter)/transportation request number/estimated shipping date/requisition status code/controller's initials. (***NOTE:*** Separate each field with a slash [/].)

6.6.7.1.2. (AETC) Comment Sequences B, C, D, E, Etc. Use to add more parts placed on order if additional sequences are needed (use format in **6.6.7.1.1.**) and for when parts are received. Field descriptions for when parts are received are as follows: State "Received"/ nomenclature/document number/date received/controller's initials.

6.7. Organization Record.

6.7.1. The CAMS system identifies an organization by number, kind, type, and detachment number. There are two organizational fields; CAMS organization and AFI 21-103.

6.7.1.1. The 21-103 organization is used for up channel reporting to REMIS of status and inventory and follows the "G" Series Special Orders. Notify MAJCOM or FOA DBA before making the change.

6.7.1.1. (AETC) Loading or deleting organizations, detachments, or operating locations must be coordinated with HQ AETC/SCML before processing the load or delete transaction in CAMS.

6.7.1.2. The CAMS organization is used for local identification. In most cases the CAMS and 21-103 organizations should be the same.

6.7.2. Assign a 4 digit organizational identification (ORG ID) only to actual units, detachments, and OLs. Report equipment and missions at unmanned sites and locations under the organization that has maintenance responsibility. You need not lose and regain the inventory to change the organization record.

6.7.2.1. The first two positions of the ORG ID are the 2 digit command code which is up channel reported to REMIS as a 3 digit command code.

6.7.2.2. The last two positions of the ORG ID are "00" for the basic (parent) unit; for example, use "1C00".

6.7.2.3. For detachments or operating locations (OL), the last two positions of the ORG ID are the detachment number or operating location letter. For example, for Detachment 2, use "1C02"; for OL "A" use "1C0A."

6.7.2.4. For an OL of a detachment, use the detachment and the OL letter; for example, "1C2A".

6.8. Organization Changes.

6.8.1. The MAJCOMs or FOAs must make organization changes in REMIS prior to any 21-103 organization change made in CAMS to avoid up channel reporting errors in CAMS notify your MAJCOM or FOA prior to loading..

6.8.1. (AETC) If the unit number, kind, type, detachment, or operating location needs to be changed, notify HQ AETC/SCML before processing the change transaction in CAMS.

6.8.2. Make organization changes in CAMS using TRIC OGT, Program NFSD80.

6.9. Inventory Records. Follow the instructions for TRICs CEL, Program NFSE20 and MCR, Program NFSK60; in AFM 66-279, volume V.

6.9.1. Gain equipment (enter it into the inventory) when your unit accepts maintenance responsibility. Be sure to enter the applicable status (active or inactive).

6.9.2. Lose equipment (place it in "loss status") when your unit no longer has maintenance responsibility.

6.9.3. When adding reportable equipment and missions to the inventory, make sure you have the right data elements and codes. These data elements are important for status and inventory reporting.

6.9.3.1. Equipment Designator: Use the equipment designator as indicated on the CAMS/REMIS SRD Table. The system won't accept equipment designators that differ from the CAMS/REMIS SRD table.

6.9.3.2. Serial Number: Use the actual equipment serial number from the equipment data plate. If the number is longer than six characters, use the last six. If the equipment has no serial number, assign one in accordance with AFMAN 23-110. If you find a duplicate serial number, verify your number and contact your MAJCOM for assistance.

6.9.3.3. Requiring Command: Enter the MAJCOM that the equipment supports. This is the command that is the customer for the equipment. See AFM 66-279, volume I, attachment 1, for a list of command codes.

6.9.4. Report red (NMC) or amber (PMC) capability impact conditions when equipment is in either active or inactive status.

6.9.4.1. Active Equipment: Equipment installed and commissioned to perform an operational mission or requirement. (Does not include cold spares or off-line equipment.)

6.9.4.2. Inactive Equipment: Equipment not commissioned or installed to perform an operational mission or requirement. Includes equipment in storage, tactical and combat communications equipment not deployed, mockups, training equipment, and equipment not being utilized to perform a mission.

6.9.4.3. (Added-AETC) Active and Inactive Equipment:

6.9.4.3.1. (AETC) Base or Site Location (if used). Enter the first characters of the name or common abbreviation for the base or site.

6.9.4.3.2. (AETC) Overhaul or Install Date. Enter the date of installation. Do not update for equipment overhaul.

6.9.4.3.3. (AETC) Host Command. Enter the AETC command code: OJ (AFCSM 21-560, Volume 2).

Chapter 7

AUTOMATIC TEST EQUIPMENT (ATE) INVENTORY, STATUS, AND UTILIZATION REPORTING

Section 7A—Reporting System Overview

7.1. How and What To Report.

7.1.1. The reporting requirements in this section are exempt from licensing in accordance with paragraph 2.11.3 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*. Report ATE through the appropriate MMIS. Data is maintained in REMIS.

7.1.2. For the purposes of this instruction, ATE includes:

- Test stations.
- Tester replaceable units (TRUs).

7.1.3. The Precision Measurement Equipment Laboratories only report the inventory and status of ATE systems that are unique to a weapon system and mission-essential systems that don't have manual back-up.

7.2. Basic Reporting Concept.

7.2.1. Each item of ATE is possessed by an Air Force training or maintenance organization (that is, it is organizational, intermediate, or depot-level).

7.2.2. The possessing unit reports:

- Possession and changes in possession.
- Conditions that change the ability of the ATE to do its mission (condition status).
- Configuration.
- Daily utilization.

7.3. Contractor Reporting. For contractor-controlled or maintained equipment, report the inventory, status, utilization, and configuration on ATE Government-furnished equipment (GFE) for contracts initiated after 1 October 1993. The administrative contracting officer sends the needed reports to the agency that asked for them, unless the contract states otherwise.

7.4. The Reporting System. Data is processed at the unit level and at the REMIS processing sites. MAJCOMs, HQ AFMC, HQ USAF, and other authorized users of the REMIS database monitor the data.

7.4.1. Units collect and input the data as shown in the applicable MMIS users manual. Send this data at specified times over the Defense Data Network (DDN) to the REMIS database.

7.4.2. HQ USAF, HQ AFMC, MAJCOMs, and other authorized users may extract reports, data, and information from REMIS to monitor and control ATE inventory, status, and utilization.

7.5. Security Classification. Do not report classified data under this instruction.

Section 7B—Reporting Responsibilities

7.6. Unit-Level Activities. All reporting starts at unit level.

7.6.1. Maintenance makes sure that ATE inventory, status, and utilization reporting is accurate and timely.

7.6.2. A maintenance official (usually the ATE section or shop supervisor):

- Ensures that the unit correctly maintains inventory, maintenance status, utilization, and configuration data.
- Ensures that the unit reports data on all ATE at their work center (using the procedures in this instruction), including
- Initial station or equipment inventory or changes.
- Initial TRU inventory or changes.
- Station or equipment status changes.
- Station or equipment utilization time
- Checks the error file daily and corrects all ATE errors with help from the unit or host database manager (DBM) as needed.
- Works with MAJCOMs, ALCs, or contractor field teams to verify inventory, status, and utilization reporting.

7.6.3. Units without access to an automated MMIS work with their command headquarters to determine alternative procedures.

7.7. MAJCOMs:

- Work with other MAJCOMs, ANG, Air Force Reserve, and non-USAF organizations to move, ship, or transfer ATE and send applicable movement reports.
- Make sure that ATE chosen for transfer meets the desired configuration requirements and is made ready for transfer in accordance with T.O. 00-20-1, ***Preventive Maintenance Program*** and other transfer inspection requirements, as applicable.
- Help MAJCOM agencies in pulling ATE inventory, status, and utilization data from the REMIS database.
- Appoint an ATE POC to their units and send the POC's name to HQ AFMC/LGMM.

7.8. MAJCOM POCs:

- Check their reporting units to make sure that ATE inventory, status, utilization, and configuration appear in the REMIS database.
- Make sure that units take action to correct any reporting discrepancy or problem.
- Work together with the units as stated in paragraph **7.6.1.** of this instruction.

7.8. (AETC) The AETC POC's address is HQ AETC/LGMTA, 555 E Street East, Randolph AFB TX 78150-4440.

Chapter 8

SPACELIFT INVENTORY, STATUS, AND UTILIZATION REPORTING

Section 8A—Spacelift Reporting

8.1. What to Report. The reporting requirements in this section are exempt from licensing in accordance with paragraph 2.11.5 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*. Each Spacelift wing reports on their spacelift vehicles and equipment through CAMS. The possessing unit reports the inventory and status of those assets. Space Launch Squadron (SLS) maintenance personnel will collect and process the information at base level.

8.2. Reporting Accuracy. Reports specified in this procedure are the basis for justifying and defending AFSPC plans, programs, and the budget. Accurate and timely reporting is critical. Errors in reporting can result in the loss of required funding, manpower authorizations, and supplies.

8.3. Inventory Reporting. Inventory reporting begins with assignment of a spacelift asset to a launch base. Assignment is the allocation of a spacelift system for a specific mission.

8.3.1. Reporting Possession. Possession takes place when the asset arrives at the launch base, and includes assets under contractor control. SLSs must report on assets IAW this instruction and applicable HQ AFSPC Space Instructions.

8.3.2. Possession Gain and Loss Criteria. Possession of an asset changes when the gaining SLS accepts the asset from the losing organization. Systems will be accounted for as long as they are assigned to an Air Force activity under Air Force operational control.

8.4. Status Reporting. Status reporting applies to systems, subsystems, and component modifications, and support general work.

8.4.1. SLS Maintenance personnel will report mission capability status on all systems, subsystems, and components.

8.4.2. All system, subsystem, or component degradation will be reported.

8.4.3. Maintenance status codes will be used to report launch operations capability IAW HQ AFSPC Space Instruction 21-103.

Section 8B—Spacelift Responsibilities

8.5. HQ AFSPC/LGM:

8.5.1. Establish requirements and procedures for reporting inventory and status of Spacelift assets.

8.5.2. Function as the ALC for the following.

- Developing and publishing Spacelift -06 Work Unit Code Manuals.
- Maintaining the Spacelift -06 Work Unit Code Manual database.
- Appoint a HQ AFSPC Spacelift Status Manager (SSM) to manage the reporting process.

8.6. Spacelift Wings (SW):

8.6.1. Appoint a wing level SSM who:.

- Ensures the SLSs appoint a squadron level SSM.
- Acts as the focal point for SLS reporting.
- Consolidates and sends reports as specified in this and supplemental instructions.

8.7. Notification Procedures. Notification of initial possession, or change in possession will be done IAW paragraph **2.15.** Message tailoring will be IAW HQ AFSPC Space Instruction 21-103.

Chapter 9

AIRCRAFT AND MISSILE EQUIPMENT ACCOUNTABILITY PROGRAM

Section 9A—General Information

9.1. What This Program Covers.

9.1.1. The reporting requirements in this section are exempt from licensing in accordance with paragraph 2.11.10 of AFI 37-124, *The Information Collections and Reports Management Program; Controlling Internal, Public, and Interagency Air Force Information Collections*.

9.1.2. The Air Force maintains a program for MAJCOM headquarters and their units to manage and control aircraft and missile assets (those assets listed in the -21 Technical Order [TO]).

9.1.3. The owning MAJCOM headquarters manages these assets.

9.1.3. (AETC) The AETC POC's address for aircraft equipment is HQ AETC/LGM, 555 E Street East, Randolph AFB TX 78150-4440. The AETC POC's address for weapons delivery equipment is HQ AETC/LGMW, 73 Main Circle, Suite 1, Randolph AFB TX 78150-4549.

9.1.4. The unit inspects, maintains, and controls these assets.

9.1.5. MAJCOM headquarters must supplement this instruction in order to guide the units on how to meet command requirements.

9.2. Need for Management and Control Procedures.

9.2.1. The management and control procedures in this instruction allow MAJCOMs and HQ AFMC to control -21 items. MAJCOMs and HQ AFMC need this control to meet normal peacetime operations and to make sure that the Air Force can meet contingency plan reallocations from home to overseas.

9.2.2. MAJCOMS and HQ AFMC must be aware of the total -21 TO inventories to better plan for replacement items and to plan intra-command and inter-command transfers of items.

9.2.3. MAJCOMs must ensure that base-level units account for -21 TO items to meet daily peacetime, war, and mobilization plan requirements.

9.2.3.1. (Added-AETC) The operation support squadron (OSS), plans, scheduling, and documentation (PS&D) or civilian equivalent will:

9.2.3.1.1. (AETC) Task each operation squadron's (OS) PS&D or civilian equivalent by memorandum to identify individuals accountable for -21 and SPRAM assets.

9.2.3.1.2. (AETC) Identify the -21 SPRAM account custodians by name, grade, and telephone number, and forward the memorandum to OSS PS&D.

9.2.3.1.3. (AETC) Consolidate squadron -21 SPRAM custodian listings and provide a copy to all squadron -21 SPRAM accountable individuals.

9.2.3.1.4. (AETC) Use this memorandum to notify accountable agencies of aircraft deployments, transfers, or arrival of new equipment so custodians can adjust records accordingly.

9.2.3.1.5. (AETC) Forward a copy of the memorandum to the host base supply equipment management element.

9.2.3.2. (Added-AETC) The equipment custodian or accountable individuals will:

9.2.3.2.1. (AETC) Control equipment in serviceable condition, including items in extended storage.

9.2.3.2.2. (AETC) Use automated or manual reports or AF Forms 1297, **Temporary Issue Receipt**, to control equipment.

9.2.3.2.3. (AETC) Maintain reports that identify equipment by type, serial number, date issued, and accountable squadron individual.

9.2.3.3. (Added-AETC) Accountable squadron individuals will:

9.2.3.3.1. (AETC) Acknowledge responsibility by signing the equipment control report.

9.2.3.3.2. (AETC) Be the point of contact to the group accountable individuals for resolving equipment problems.

9.2.3.3.3. (AETC) Track location of equipment deployed, installed on aircraft, in repair, or stored in support sections.

9.2.3.3.4. (AETC) Ensure in-use equipment is monitored and scheduled for maintenance as required.

9.3. Aircraft and Missile Equipment Inventory.

9.3.1. The -21 TO lists all items authorized for each aircraft or missile mission, design, and series (MDS). The manufacturer prepares the -21 TO and reviews or changes it as equipment is modified.

9.3.2. Do not change the -21 TO without MAJCOM and AFMC Program Manager approval.

9.3.3. The -21 TO is divided into three sections covering the three categories of equipment:

- Section I, Maintenance Safety and Protection Equipment (MSPE) used to protect the aircraft or missile from damage or to make it safe for maintenance.
- Section II, Alternate Mission Equipment (AME), used to configure an aircraft or missile for one of its operational missions. It can be installed and removed quickly.
- [2]Section III, Crew and Passenger Support Equipment (CPSE), used for life support and comfort of crew and passengers.

9.3.4. At unit level, automated products usually control inventories, divided into custody accounts. To build these accounts add selected items listed in the -21 TO and command supplements into Tables of Allowance (TA).

9.3.5. Use manual records (AF Form 2691, ***Aircraft/Missile Equipment Property Record***) for some items, such as communications security (COMSEC) equipment, prototypes, or specialized equipment too few in number to be listed in automated products (see **Attachment 9**).

9.3.5. (AETC) Squadrons are accountable for COMSEC equipment. Each squadron may establish COMSEC subaccounts of the base account. Units without sufficient safeguards or storage space within the squadron may maintain or store COMSEC equipment in the maintenance squadron until

sufficient safeguards or storage space is acquired within the squadron. Units establish procedures to track location and status of all COMSEC equipment.

9.4. MAJCOM Supplements to -21 TOs and This Instruction.

9.4.1. MAJCOMs supplement weapons system -21 TO to show items that are unique to an MDS and MAJCOM, such as specialized communications, reconnaissance, weapon delivery, and guidance systems.

9.4.1.1. (Added-AETC) Coordinate with applicable HQ AETC weapons system managers for required changes in -21 T.O.s and command-peculiar equipment.

9.4.1.2. (Added-AETC) Owning units account for installed specialized or classified equipment.

9.4.2. Include items (other than standard configuration items) that are listed on MESLs in the MAJCOM supplement to the -21 TO if they are not in the basic TO.

9.4.2.1. List standard configuration items that may be removed for alternate missions in the MAJCOM supplement to the -21 TO as AME. When you treat standard configuration items as AME, the number per aircraft authorized is the largest number that can be installed.

9.5. Equipment Not Included in -21 T.O.s. These items are not included in -21 TOs:

- Fixed or installed components that are part of the basic vehicle and needed for normal operation.
- Consumable items other than safety items (such as publications, forms, or relief bags).
- Maintenance and servicing equipment in the TA or the -4 TO.

9.6. Asset Categories.

9.6.1. The -21 TO lists all assets authorized to an aircraft or missile MDS. Items are defined and coded (using expendability, recoverability, and repairability category [ERRC] codes) as either:

- Equipment.
- Reparable items.
- Expendable items.

9.6.1.1. The MAJCOMs, AFMC Logistics Centers or Product Centers, or Defense Logistics Agency (DLA) that have management responsibility for the item determine its definition.

9.6.2. The management and control method is different for each category of items.

9.6.2.1. Mark the "Remarks" column to show the management and control method by item definition.

9.6.3. MAJCOMs and AFMC Centers identify items that are managed and controlled as equipment (ERRC NF/ND).

9.6.3. (AETC) Maintain accountability files according to AFMAN 37-139 (64 series).

9.6.3.1. Mark the -21 TO or the command supplement to show the TA where to list the equipment.

9.6.3.2. The maintenance activity uses the management and control methods of the Air Force Equipment Management System (AFEMS).

9.6.3.3. The record vehicles are the Custody Account (CA) or Custody Receipt Listing (CRL) and AF Form 601, ***Equipment Action Request***.

9.6.4. MAJCOMs or AFMC Centers identify items that are managed and controlled as repairables (ERRC XD and XF).

9.6.4.1. Mark the -21 TO to show that the maintenance activity must manage the asset as a reparable.

9.6.4.1. (AETC) Accountable individual annotates the -21 T.O. with the applicable ERRC to indicate which assets are managed as repairable.

9.6.4.2. The maintenance activity uses the management and control methods of the Air Force Recoverable Assembly Management Process (RAMP).

9.6.4.3. Send a Special Purpose Recoverables Authorized to Maintenance (SPRAM) listing to the appropriate workcenter to identify numbers on-hand.

9.6.4.4. The record vehicle is DD Form 1348-1A, ***DoD Single Line Item Release/Receipt Document***, or AF Form 2692, ***Aircraft/Missile Equipment Transfer, Shipping Listing***.

9.6.5. MAJCOMs, AFMC Centers or DLA identify items that are managed and controlled as expendables (XB3).

9.6.5.1. Mark the -21 T.O. to show that the maintenance activity must manage the items as expendables.

9.6.5.2. As a rule, maintenance does not manage or control these item once they've been issued.

9.6.5.3. Some items defined as expendables may require specific management procedures. For example, maintenance must have the right number of cables on-hand for ejector racks operation. MAJCOMs may choose to manage these items like the end item they are used with.

9.6.5.3. (AETC) Calculate total quantities authorized using quantities listed in applicable -21 T.O.s multiplied by the number of assigned unit aircraft. HQ AETC/LGMW ensures item managers have visibility of XD coded munitions -21 assets according to AFMAN 23-110, *USAF Supply Manual*. All other units manage all munitions related -21 equipment using AF Form 2691, **Aircraft/Missile Equipment Property Record,** and supporting documentation. Quantity variances of armament and munitions to -21 T.O. levels require HQ AETC/LGMW approval.

9.6.5.4. (Added-AETC) Accountable individuals monitor expendable (XB3) assets identified in sections I, II, and III of the applicable -21 T.O. to ensure on-hand quantities are sufficient to meet unit needs. The following guidance applies:

9.6.5.4.1. (AETC) Use AF Form 2691 to maintain visibility of these items. Maintain one AF Form 2691 for each applicable line item in the -21 T.O.

9.6.5.4.2. (AETC) Accomplish and document annual inventories by placing the date in Block A and writing "INV" in Block E. Adjust quantities and locations accordingly.

9.6.5.4.3. (AETC) Units may place selected expendable assets on bench stock to serve as spares if consumption data warrants. Annotate levels established for bench stock in block J. Actual on-hand level in bench stock need not be updated.

9.6.5.4.4. (AETC) Expendable assets placed on bench stock are exchanged on a one-for-one basis. Exchange of item or AETC Form 138, **Lost Tool/Chit Investigation Record,** is required to maintain accountability. Retain AETC Forms 138 in Tab D of the custodial file for 1 year.

9.6.5.4.5. (AETC) Dash 21 items locally manufactured to replace -21 T.O. items reference the same line item number as listed in the -21 T.O. Additional locally manufactured items maintained, but not listed in the -21 T.O., reference local line item numbers; for example, L-1, L-2, etc.

9.6.5.4.6. (AETC) Units develop local procedures to identify all locally manufactured items, accountable agency and appropriate line item number. Disposal of excess quantities of serviceable armament/munitions -21 assets require HQ AETC/LGMW approval.

Section 9B—Responsibilities

9.7. Using Command. Each MAJCOM supplements this instruction or the -21 TO for assigned weapon systems or both, or issues separate command instructions. The using command:

- Sets up an OPR to focus management attention to -21 assets and informs the HQ AFMC/LGMM OPR.
- Sets up a control system to make sure base-level accounting of items is accurate and tailored to unique MAJCOM requirements. Authorized -21 levels must not be greater than the number of assigned aircraft without prior MAJCOM and AFMC approval (refer to paragraph **9.11.**).
- Works with HQ AFMC/Program Manager (PM) to identify -21 TO items that must be controlled and reported by AFEMS (see AFM 67-1, volume II, part 2, chapter 22) or by SPRAM (AFM 67-1, volume I, part 1, chapter 11).
- Reallocates -21 items within the command.
- Works with program and item managers and gaining commands to reallocate -21 items as part of inter-command aircraft transfer.
- Identifies the base-level organization that will oversee daily asset management and control.
- Works with subordinate units and other MAJCOM headquarters to resolve equipment shortages according to paragraph **9.14.** or to locate equipment removed from transient aircraft according to paragraph **9.15.**
- Annually reviews -21 TO for asset requirements of assigned weapon systems in coordination with program and item managers and redistributes or adjusts items as appropriate.

9.7. (AETC) Bullet 1. For aircraft support equipment, the HQ AETC POC's address is: HQ AETC/LGM, 555 E Street East, Randolph AFB TX 78150-4440. For weapons delivery equipment, the HQ AETC POC's address is: HQ AETC/LGMW, 73 Main Circle, Randolph AFB TX 78150-4440.

9.7. (AETC) Bullet 2. The R25 SPRAM listing is the asset inventory for all repairable coded XD assets. The CA/CRL listing is the asset inventory for equipment coded assets (ERRC NF/ND). Maintain AF Forms 2691 to provide unit visibility over XF3 and expendable (XB3) assets in sections I, II, and III of the applicable aircraft -21 T.O. Account custodians maintain a custodian file according to AFMAN 23-110, Volume 2, Part 13, and also **Figure 9.1.**.

9.7. (AETC) Bullet 6. The operations group commander (OG/CC) assigns responsibilities for aircraft travel pods. The armament flight exercises daily control and management for all armament-related suspension equipment.

9.7. (AETC) Bullet 8. The HQ AETC/LGMA, LGMAA, LGMAF, LGMAU, and LGMW weapons systems managers conduct annual reviews of each weapon system -21 T.O. The reviews ensure authorizations are adequate to support employment roles and identify changes required in authorizations. In addition, the weapons system managers review each unit's -21 asset levels and reallocate assets within AETC as required.

9.8. AFMC.

9.8.1. HQ AFMC:

- Fulfills using command responsibilities (paragraph **9.7.**).
- Develops control procedures for items not intended for -21 TO (such as prototypes under development, test, and evaluation).
- In coordination with the gaining or using command, develops an initial -21 TO for a weapon system based on the PMD, the contractor's proposed AF Form 2692, and proposed -21 TO.

9.8.2. Through program and item managers, uses yearly reviews to:

- Keep -21 TO up-to-date in coordination with MAJCOMs.
- Ensure that equipment listed in aircraft and missile -21 TOs (and the MAJCOM supplements) include all items that MAJCOMs and HQ AFMC must oversee.
- Validate MAJCOM -21 levels and make changes as needed.
- Maintain Air Force oversight of -21 item inventory and locations to help determine necessary replacement buys, war and mobilization planning, and war reserve materiel (WRM) stockage objectives.
- Keep enough stock of listed equipment to fulfill daily requirements and wartime taskings.
- Check that equipment listed in the -4 TO both as basic airframe equipment and as AME (for example, missile launch rails for F-16) is listed as AME in the -21 TO.

9.8.2.1. Program and Item Managers manage inter-command reallocation of items that result from aircraft transfer or changing mission requirements.

9.8.2.2. Program and Item managers give disposition instructions for -21 items that are declared excess as a result of aircraft retirement or mission changes (usually warehoused and stored as WRM until clearly obsolete).

9.8.2.3. Program and Item managers release excess items for sale through Defense Reutilization and Marketing Office (DRMO) channels, when approved by MAJCOMs and HQ USAF (see also paragraph **9.11.**).

9.9. Base Activities.

9.9.1. Units must set up procedures and assign responsibilities to:

- Provide accurate accounting, oversight, and daily control of items.

- Provide item inventory and location information to MAJCOM headquarters and to system or item managers.

9.9.1. (AETC) Bullet 2. Forward a copy of unit inventory results to the appropriate HQ AETC weapons system managers not later than 30 September annually. Report shortages impacting unit mission via message to applicable weapons system manager. Hold disposition of overages pending MAJCOM reconciliation.

9.9.2. MAJCOMs decide which workcenters have accounting responsibilities for the items listed in the -21 TO.

9.9.2.1. (Added-AETC) The workcenter responsible for maintaining the aircraft is also responsible for control of and accountability for all associated aircraft -21 equipment.

Figure 9.1. (AETC) Requirements for Custodian File.

Tab A, Current Action:
- AF Forms 2691
- R25 (SPRAM) listing (if only for -21 equipment)

Tab B, Information Files:
- AF Forms 1297, **Temporary Issue Receipt**, or
- In-use equipment reports

Tab C, Suspense and Completed Files:
- Suspense: Due-out requests and supporting documents
- Completed: Hold completed actions until new R25 is received

Tab D, Adjustment Documents:
- Copy of applicable AETC Form 138
- Report of Survey
- AF Forms 2692, **Aircraft/Missile Equipment Transfer/Shipping Listing**; DD Forms 1149, **Requisition and Invoice/Shipping Documents,** or DD Forms 1348-1a
- Authorization for SPRAM assets

Tab E, Register of Control Numbers:
- AF Forms 126, **Customer Request Log**
- DO4, D18, and M30 (for SPRAM assets)

Tab F, Regulations and Certifications:
- Copy of this supplement and any applicable unit supplement
- Current custodian designation letter
- AF Forms 2426, **Training Request and Completion Notification**, or other certification of equipment management training for primary and alternate custodians

9.9.2.2. (Added-AETC) The armament flight or off-equipment armament function has the accounting responsibility for all weapons delivery (work unit code 75000 series) -21 alternate mission equipment (AME) spares that require off-equipment scheduled maintenance by the applicable aircraft -6 T.O.s. Accountability for all adapters, and all weapons delivery -21 spares wiring harnesses and cables lies with the workcenter responsible for maintaining the aircraft. Specific SPRAM accounting guidance is in AFMAN 23-110, Volume 2, Part 13, Chapter 9.

9.9.2.3. (Added-AETC) All weapons delivery (work unit code 75000 series) -21 normally installed equipment (NIE) is controlled and accounted for by the weapons function of the workcenter responsible for maintaining the aircraft.

9.9.3. Base Supply Equipment Management Element is the contact for items controlled under AFEMS and SPRAM.

9.9.4. The workcenter, designated by their MAJCOM, maintains the items inventory (CA/CRL or SPRAM listing or both).

9.9.4.1. As new items arrive or are transferred, update the inventory listing using AF Forms 601, 2005, ***Issue/Turn-In Request***, 2692, or DD Form 1348-1A, depending on how the items were moved (see paragraphs **9.13.** through **9.18.**).

9.9.4.1. (AETC) For airlift and tanker aircraft, also update the inventory listing using the applicable programs (F9002, F9015) in CAMS for mobility (GO81).

9.9.4.2. The custodian keeps a record copy of the input documents.

9.9.4.3. Inventory and reconcile the account upon change of custodian and/or:

- Host MAJCOM determines if frequency of CA/CRL account is more often.
- Inventory SPRAM account at least annually.

9.9.4.3. (AETC) Inventory and reconcile the CA/CRL account at least once a year and report shortages impacting unit mission capability via message to the applicable HQ AETC weapons system manager.

9.9.5. The -21 Support Function:

- Monitors the movement of -21 items.
- Coordinates the gathering, packing, and shipping of -21 items when aircraft are transferred.
- Notifies the designated workcenter of the number of items to be shipped.
- Reconciles shortages with gaining or losing organizations and sends copies of correspondence to gaining and losing MAJCOM headquarters.
- Forwards AF Form 2692 to PS&D.

9.9.5. (AETC) ***NOTE:*** (Added) The OSS PS&D or civilian equivalent function will control TCTOs on -21 items according to AFI 21-101, *Maintenance Management of Aircraft*.

Section 9C—Managing -21 Assets

9.10. Transferring Aircraft or Missile -21 Assets.

9.10.1. MAJCOM headquarters must manage the reallocation of aircraft or missile -21 items after transfer decisions have been made.

9.10.1.1. For intra-command reallocations, the MAJCOM headquarters:

- Sends the transfer directives to subordinate units.
- Coordinates the movement.
- Notifies HQ AFMC program and item managers of item inventory and location information.

9.10.1.2. For inter-command or inter-theater movement, MAJCOMs coordinate the transfer directives with HQ AFMC as well as with the gaining command.

9.10.2. Transfer directives must:

- Identify the base-level functions that coordinate the preparation, gathering, and shipping of -21 items.
- Identify which items will be transferred aboard the aircraft and which items will be shipped separately.

9.10.3. If an aircraft or missile is transferred to a depot or contractor facility and will return to the same unit, the transferring unit keeps equipment that the depot does not need. Use AF Form 2692 to transfer installed equipment.

9.10.4. If aircraft or missiles are transferred by way of a depot or contractor program, the losing unit ships only the needed equipment and the equipment listed in the transferring directive. The losing unit sends the rest to the gaining unit no later than 30 days before the completion date.

9.10.5. For transfers through Military Assistance Program or donations and sales to agencies outside the Air Force, HQ AFMC decides what equipment to transfer.

9.10.6. All requests to remove assets from AMARC storage code STT (FMS) aircraft are sent to SAF/IA and HQ USAF/XPP with information copy to HQ USAF/ILM.

9.11. Disposing of Excess Assets.

9.11.1. Authorized -21 levels must not be greater than the number of assigned aircraft unless MAJCOM and AFMC approves the excess.

9.11.2. Sometimes the number of -21 items on hand may exceed authorized levels because of aircraft loss, discontinuance of a specific mission, and aircraft retirement.

9.11.2.1. In these cases, the owning MAJCOM headquarters works with program and item managers to put together disposition instructions.

9.11.3. In the event of aircraft loss, the unit usually carries the -21 items as excess.

9.11.3.1. MAJCOM headquarters may elect to reallocate these items to another unit, depending on need, or to add them to WRM.

9.11.3.2. Adjust the inventory to reflect items that were lost with the aircraft, using DD Form 200, ***Financial Liability Investigation of Property Loss***.

9.11.4. When the Air Force discontinues a specific mission or combat capability, the owning unit usually warehouses and manages the assets as WRM.

9.11.4.1. Only HQ USAF/XPP through HQ USAF/XPI issues authorization for aircraft disposition through the DRMO.

9.11.5. When aircraft are retired in other than inviolate (XS) or Security Assistance Program (SAP) (XT) storage, HQ AFMC reallocates items that may be used on other aircraft (for example, racks, adapters, and cargo handling equipment).

9.11.6. When aircraft or missile items are being retired, HQ USAF/XPP will recommend appropriate disposition, such as for spares, training (ground maintenance/ABDR), and AF Museum.

9.12. Increasing Authorized Levels.

9.12.1. Unit-level requirements above the number of assigned aircraft are approved only after:

- The MAJCOM headquarters OPR approves the unit-level request.
- The Program manager agrees with the MAJCOM request.
- A source for the item has been identified (MAJCOM redistribution, WRM, or other source).

9.12.2. Items sourced from WRM require HQ USAF/ILSP/ILMY approval.

9.12.3. MAJCOM funded items (such as missile launchers) require no further approval. Units must identify funds (from either AFMC or MAJCOM) and get the approval of the appropriate program and Funds Programs Manager for all other shortfalls requiring funding.

9.12.4. The program manager approves the requirements after these criteria have been met.

9.12.5. Refer unresolved disagreements to HQ AFMC/XRW/LGS for resolution.

9.13. Arrival of New Equipment.

9.13.1. MAJCOM headquarters puts together and sends out to gaining units directives that specify:

- Which base level organization controls the various -21 items.
- Which account system (AFEMS, RAMP, SPRAM) to use.
- Which expendable items the unit must manage and control.

9.13.1.1. Coordinate these directives with the contractor, the losing command, or HQ AFMC so that the shipper knows the correct address and "mark for" information.

9.13.1.2. List all items that are installed on, delivered with, or carried onboard the aircraft or missile on AF Form 2692.

9.13.1.3. In all cases, the total amount of -21 equipment must equal the PMD requirements for the weapon system.

9.13.1.4. List any assets that are delivered separately on DD Form 1149 or DD Form 1348-1A.

9.13.2. The designated workcenter works with base supply (equipment management or materiel management) to load the authorized quantities into the account system. As new equipment arrives, use the

shipping document (AF Form 2692, DD Form 1149, or DD Form 1348, ***DoD Single Line Item Requisition System Document***) as the input and record copies to adjust the on-hand quantities.

9.13.3. Wing PS&D must tell the applicable maintenance organizations and the life support function when the aircraft is to arrive so they can meet the aircraft and to inventory the items.

9.13.3.1. Designated workcenters (if appropriate) remove and store items and update on-hand quantities.

9.14. Adjusting for Shortages.

9.14.1. Shortages found during acceptance inventories: will be identified to the losing unit (or SPD for new weapon systems) within 24 hours. Send a copy of the notification to MAJCOM headquarters.

9.14.2. MAJCOM headquarters must resolve shortages that cannot be corrected quickly. If no accountable individual can be identified for shortages found during acceptance inventories, handle them according to AFM 67-1, volume I, part 1, and volume IV, part 1. Handle accountability for equipment lost during flight, damaged, or destroyed according to AFM 67-1, volume 1, part 1.

9.15. Removing Assets From Transient Aircraft.

9.15.1. List equipment removed and not replaced on AF Form 1297, ***Temporary Issue Receipt***. A designated representative of the transient activity completes and signs this form in three copies and :

- Mails one copy to the PS&D section or equivalent at home station.
- Keeps one copy and places one copy in AFTO Form 781 series binder before the aircraft leaves.

9.15.2. The LG, or equivalent of the base where the aircraft is transient ensures that the removed equipment is returned to the owning base within 30 days.

9.15.2.1. Send the transportation control number (TCN) to the owning unit as soon as it is known.

9.15.2.2. If the inventory is not correct, the owning unit takes action according to procedures in paragraph **9.14.**

9.16. Managing Deployed Assets.

9.16.1. The owning MAJCOM and the deployed unit retain accountability for -21 items that are deployed for exercises and contingencies. MAJCOM headquarters must review base mobility plans and supported OPLANs at least once a year and when taskings change, to make sure that equipment lists include the proper numbers and types of -21 items.

9.16.2. MAJCOM headquarters must make sure that deploying units identify:

- Items that are deployed on or with the aircraft or missile.
- Items that are sent through normal transportation channels.
- Items that are deployed by dedicated support aircraft.
- The account system (automated or manual) used to control assets.
- The function or individual who is responsible for controlling items.

- Any -21 shortages or authorization changes identified during contingencies.

NOTE: Identify shortages or authorization changes to the deployed combat Headquarters LG for prioritization and resolution.

9.17. Transferring Assets.

9.17.1. The PS&D or equivalent is the focal point for transferring aircraft, missiles, and associated assets. This office must notify the maintenance squadrons and the life support function of the transfer date.

9.17.2. Each accountable workcenter prepares items for transfer.

9.17.2.1. If shipping the item on or with the aircraft or missile, list it on AF Form 2692. See **Attachment 10** for instructions on filling out this form.

9.17.2.2. If shipping the item separately, list it on AF Form 60l, DD Form 1149, or DD Form 1348-1A. Use one copy of the form to adjust inventory records.

9.17.3. The -21 Support Function or equivalent compiles this information and prepares a "master" AF Form 2692 for all items to be transferred on or with the aircraft or missile. Then the -21 Support Function or equivalent prepares a listing of other items to be transferred (including date, mode of shipment, and transportation control numbers) and sends it to the gaining organization. Send copies of these lists to MAJCOM headquarters.

9.18. Changing the Accountable Individual.

9.18.1. When you have to change the custodian of a -21 items account, proceed as you would for other types of accounts.

9.18.2. The new account custodian must be eligible according to published MAJCOM directives and must have attended custodian training.

9.18.3. Inventory the account, reconcile differences, and have both individuals sign a statement to the effect that the account is true.

9.19. Forms Prescribed. AF Form 2691, **Aircraft/Missile Equipment Property Record** and AF Form 2692, **Aircraft/Missile Equipment Transfer/Shipping Listing.**

9.20. (Added-AETC) Forms Adopted. DD Forms 1149 and 1348-1a; AF Forms 126, 1297, 2426, 2691, and 2692; AFTO Form 92; and AETC Form 138.

William P. Hallin, Lt General, USAF
DCS/Installations & Logistics

Attachment 1

GLOSSARY OF ABBREVIATIONS, ACRONYMS AND TERMS

Abbreviations and Acronyms

ACI—Analytical condition inspection

ACP—Allied communications publication

ADE—Automated data element

ADP—Automatic data processing

AFCA—Air Force Communications Agency

AFDSDC—Air Force Data Systems Design Center

AFEMS—Air Force Equipment Management System

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFMC—Air Force Materiel Command

AFR—Air Force Regulation

AGE—Aerospace Ground Equipment

ALCM—Air Launched Cruise Missile

AMARC—Aerospace Maintenance and Regeneration Center

AME—Alternate Mission Equipment

AMMIS—Aircraft Maintenance Manpower Information System

ASIP—Aircraft Structural Intregity

ATE—Automatic Test Equipment

ATE-MIS—Automatic test equipment - management information system

AVDO—Aerospace Vehicle Distribution Officer

AVP—Aerospace vehicle project

AWM—Awaiting maintenance

AWP—Awaiting parts

BAC—Backlog

BSL—Basic system list

CA—Custody account

CAMS—Core Automated Maintenance System

CDB—Centralized database

CLS—Contractor logistics support

CND—Cannot duplicate

COMSEC—Communications security

CONUS—Continental United States

CPSE—Crew and passenger support equipment

CRL—Custody receipt listing

DDN—Defense Data Network

DEP—Departed

DES—Destination

DLA—Defense Logistics Agency

DoD—Department of Defense

DPI—Data processing installation

DRMO—Defense Reutilization and Marketing Office

EAV—Estimated availability (date)

EDD—Estimated delivery date

ERRC—Expendability, recoverability, and repairabilty category code

FCF—Functional check flight

FMC—Fully mission capable

FMS—Foreign military sales

FOA—Field Operating Agency

FSL—Full system list

FTD—Field training detachment

GFP—Government-furnished property

GMT—Greenwich Mean Time

ICBM—Intercontinental Ballistic Missile

ID—Identification

IM—Inventory manager

IMMP—Improved Maintenance Management Program

INW—In work

ITA—Interface test adapter

JCS—Joint Chiefs of Staff

LOC—Location

LRM—Line replaceable module

LRU—Line replaceable unit

MAAG—Military Assistance Advisory Group

MAJCOM—Major command

MATE—Modular automatic test equipment

MDS—Mission, design, and series

MESL—Minimum essential subsystem list

MMIS—Maintenance Management Information System

MOA—Memorandum of Agreement

MRA—Mission ready available

MSPE—Maintenance safety and protection equipment

MTS—Mobile training sets

NMC—Not mission capable

NMCB—Not mission capable, both (maintenance and supply)

NMCM—Not mission capable, maintenance

NMCS—Not mission capable, supply

NRTS—Not repairable this station

OCR—Office of Collateral Responsibility

OPR—Office of Primary Responsibility

PA—Program Aerospace Vehicles and Flying Hours

PDM—Programmed Depot Maintenance

PEC—Program element code

PEID—Program element identification

PMC—Partial mission capable

PMCM—Partial mission capable, maintenance

PMCS—Partial mission capable, supply

PS&D—Plans, scheduling, and documentation

PUP—Pickup point

RAM—Rapid area maintenance

RAMP—Air Force Recoverable Assembly Management Process

RCN—Reports control number

RCS—Reports control symbol

REMIS—Reliability and Maintainability Information System

RPIE—Real property installed equipment

RTE—Resident training equipment

RTOK—Retest okay

SAP—Security Assistance Program

SIOP—Single integrated operational plan

SLS—Space Launch Squadron

SM—System manager

SOA—Separate operating agency

SPD—System program director

SPRAM—Special purpose recoverables authorized to maintenance

SRAM—Short Range Attack Missile

SRD—Standard reporting designator

SRU—Shop replaceable unit

SSM—Spacelift Status Manager

STEP—Special training equipment program

TA—Table of allowances

TCT—Total contract training

TCTO—Time Compliance Technical Order

TMA—Test module adapter

TMO—Traffic Management Office

TO—Technical order

TPS—Test program set

TRAP—Tanks, racks, adapters, and pylons

TRIC—Transaction identification code

TRU—Tester replaceable unit

VSN—Vehicle serial number

VSND—Vehicle serial number, delayed

WRM—War Reserve Materiel

WUC—Work unit code

Terms

Active Equipment—Equipment installed and commissioned to perform an operational mission or requirement. (Does not include cold spares or off-line equipment.)

Aerospace Vehicle—Includes all aircraft and selected missiles and drones (ADM, AGM, AQM, BQM, CIM, CQM, LGM, PQM, and RPV).

Aircraft Inventory Categories—Inventory is divided into two distinct and separate areas: assignment and possession. Assignment and possession are further identified by purpose codes. Current approved purpose codes are identified in the Air Force Data Dictionary.

Amber Condition—(Partial Mission Capable (PMC)). System or equipment functioning in such a way that it can perform at least one, but not all, of its missions/functions. (Impaired but usable) Equipment must be at least amber when you order parts partially mission capable supply.

Assignment—Assignment is the allocation of an aircraft by HQ USAF to MAJCOMs for the purpose of carrying out assigned wartime, training, and/or test missions. Specific purpose identifier codes are used for assignment.

Capability Impact Code—A code used to indicate a degraded C-E equipment or mission condition (A-Amber) or nonoperational condition (R-Red). (See the Air Force Data Dictionary for directions to access).

C-E Functional Component Groups—C-E components that are not aligned under end-items or systems and that perform a stand-alone function.

Condition status—A term describing an aerospace vehicle's ability to perform its assigned missions.

Delay Code—An alpha code used to indicate why a piece of C-E equipment has not been returned to an operational status. (See Air Force Data Dictionary for directions to access)

Downtime Code—An alpha code used to indicate why a piece of C-E equipment is not operational. (See Air Force Data Dictionary for directions to access)

Equipment Status Report (ESR) Number—A number reporting an individual downtime event in the C-E Status and Inventory Reporting System. Same as the job control number.

Gain—The assumption of possession and responsibility for an item by a unit.

Green Condition—(Fully Mission Capable (FMC)) Equipment/system functioning as required in T.O. specifications and capable of supporting its mission requirements.

Host Command—The command providing host base support to the activity maintaining a piece of equipment.

Inactive Equipment—Equipment not commissioned or installed to perform an operational mission or requirement. Includes equipment in storage, tactical and combat communications equipment not deployed, mockups, training equipment, and equipment not being utilized to perform a mission.

Inventory Category Codes—These codes are used in the allocation process and are divided into two categories; assignment and possession.

Loss—The release of possession and responsibility for an item by a unit.

Neutral Flightcrew—A crew not from the gaining or losing commands.

Possession—Possession is the actual acceptance, operational use (utilization), or designation of responsibility for an aircraft. Data collection is described in the appropriate users manual.

Red Condition—(Not Mission Capable - (NMC)). The system or equipment doesn’t meet the T.O.

specifications; therefore unable to perform any of its assigned missions or functions. Unusable (neither in use nor available for use). The equipment must be Red when you order parts Not Mission Capable Supply.

Requiring Command—The command that has most of the requirements for use of the equipment under consideration.

Termination—The deletion of an aerospace vehicle from the Air Force Inventory because any of these apply:

- It is transferred to a non-Air Force activity.
- It is damaged beyond economical repair.
- It is destroyed.

Trainer—Equipment designed and procured specifically for formal training programs. For this regulation, only trainers listed in Air Force Data Dictionary are reportable.

Attachment 2

MAINTENANCE STATUS CODES AND CONDITION STATUS CODES

NOTE: These codes are reported through the MMIS to REMIS and re available to all REMIS users.

A2.1. FMC - Full Mission Capable. The aircraft is capable of doing all of its assigned missions.

A2.2. PMC- Partial Mission Capable. Material condition of an aircraft or training device indicating that it can perform at least one, but not all of its missions.

A2.2.1. PMCB- Partial Mission Capable Both Maintenance and Supply (Condition Status Code F). The aircraft can do at least one, but not all, of its assigned missions because of maintenance and supply.

A2.2.2. PMCM- Partial Mission Capable Maintenance (Condition Status Code G). Material condition of an aircraft or training device indicating that it can perform at least one, but not all, of its missions because of maintenance requirements existing on the inoperable subsystems(s).

A2.2.3. PMCS- Partial Mission Capable Supply (Condition Status Code H). Material condition of an aircraft or training device indicating that it can perform at least one, but not all of its missions because maintenance required to clear the discrepancy cannot continue due to a supply shortage.

A2.3. NMC - Not Mission Capable. The aircraft can't do any of its assigned missions.

A2.3.1. NMCA- Not Mission Capable Airworthy. The aircraft can't do any of its assigned missions. The aircraft can fly (not restricted from use).

A2.3.2. NMCB - Not Mission Capable Both Maintenance and Supply. The aircraft can't do any of its assigned missions because of maintenance and supply. The aircraft can't fly (restricted from use).

A2.3.2.1. NMCBA- Not Mission Capable Both Maintenance and Supply Airworthy. The aircraft can't do any of its assigned missions because of maintenance and supply. The aircraft can fly (not restricted from use).

A2.3.2.2. NMCBS- Not Mission Capable Both Maintenance and Supply Scheduled (Condition Status Code B) The aircraft can't do any of its assigned missions because of supply and unfinished required inspections or scheduled maintenance. The aircraft can't fly (restricted from use).

A2.3.2.3. NMCBU-Not Mission Capable Both Maintenance and Supply Unscheduled (Condition Status Code A). The aircraft can't do any of its assigned missions because of supply and unfinished repair or reinstallation. The aircraft can't fly (restricted from use).

A2.3.2.4. NMCBSA- Not Mission Capable Both Maintenance and Supply Scheduled Airworthy (Condition Status Code L) The aircraft can't do any of its assigned missions because of supply and unfiinshed required inspections or scheduled maintenance. The aircraft can fly (not restricted from use).

A2.3.2.5. NMCBUA-Not Mission Capable Both Maintenance and Supply Unscheduled Airworthy (Condition Status Code K). The aircraft can't do any of its assigned missions because of supply and unfinished repair or reinstallation. The aircraft can fly (not restricted from use).

A2.3.3. NMCM-Not Mission Capable Maintenance. The aircraft can't do any of its assigned missions because of maintenance. The aircraft can't fly (restricted from use).

A2.3.3.1. NMCMA-Not Mission Capable Maintenance Airworthy. The aircraft can't do any of its assigned missions because of maintenance. The aircraft can fly (not restricted from use).

A2.3.3.2. NMCMS- Not Mission Capable Maintenance Scheduled (Condition Status Code D). The aircraft can't do any of its assigned missions because of unfinished required inspections or scheduled maintenance. The aircraft can't fly (restricted from use).

A2.3.3.3. NMCMU-Not Mission Capable Maintenance Unscheduled (Condition Status Code C). The aircraft can't do any of its assigned missions because of unfinished, unscheduled maintenance. The aircraft can't fly (restricted from use).

A2.3.3.4. NMCMSA-Not Mission Capable Maintenance Scheduled Airworthy (Condition Status Code N). The aircraft can't do any of its assigned missions because of unfinished required inspections or scheduled maintenance. The aircraft can fly (not restricted from use).

A2.3.3.5. NMCMUA-Not Mission Capable Maintenance Unscheduled Airworthy (Condition Status Code M). The aircraft can't do any of its assigned missions because of unfinished, unscheduled maintenance. The aircraft can fly (not restricted from use).

A2.3.4. NMCS-Not Mission Capable Supply (Condition Status Code E). The aircraft can't do any of its assigned missions because of supply. The aircraft can't fly (restricted from use).

A2.3.4.1. NMCSA-Not Mission Capable Supply Airworthy (Condition Status Code P). The aircraft can't do any of its assigned missions because of supply. The aircraft can fly (not restricted from use).

A2.4. TNMC - Total Not Mission Capable. NMCS, NMCSA, NMCMU, NMCMS, NMCMUA, NMCMSA, NMCBS, NMCBU, NMCBUA, and NMCBSA added together equal TNMC. The aircraft can't do any of its assigned missions. Same as NMC.

A2.4.1. TNMCS - Total Not Mission Capable Supply. NMCS, NMCBU, NMCBS, NMCSA, NMCBUA and NMCBSA added together equal TNMCS. The aircraft can't do any of its assigned missions because of supply.

A2.4.2. TNMCM - Total Not Mission Capable Maintenance. NMCMU, NMCMS, NMCBU, NMCBS, NMCMUA, NMCMSA, NMCBUA, and NMCBSA added together equal TNMCM. The aircraft can't do any of its assigned missions because of maintenance.

A2.4.3. TPMCS - Total Partial Mission Capable Supply. PMCS and PMCB added together equal TPMCS. The aircraft can do at least one, but not all, of its assigned missions because of supply.

A2.4.4. TPMCM - Total Partial Mission Capable Maintenance. PMCM and PMCB added together equal TPMCM. The aircraft can do at least one, but not all, of its assigned missions because of maintenance.

A2.4.5. TNMCA - Total Not Mission Capable Airworthy. NMCBA, NMCMA, NMCSA, NMCBUA, and NMCBSA, NMCMUA, and NMCMSA added together equal TNMCA. Same as NMCA.

A2.4.6. Total Flyable (TF) FMC, PMC and NMCA added together equal TF. The aircraft can fly.

Attachment 3

STANDARD MESL MISSION CODES

AAC - Air to Air Conventional

ACP - Airborne Command and Control (Command Post)

ACT - Airborne Command and Control (Tactical)

ACW - Airborne Command and Control (Early Warning)

ADC - Air Defense, Conventional

ADD - Air Defense, Dual

ADN - Air Defense, Nuclear

ALA - Airlift, Airland

ALE - Airlift, Evacuation

ALT - Airlift, Tactical

AMN - Administrative Support

AR - Air Refueling

ASC - Air to Surface, Conventional

ASD - Air to Surface, Dual

ASN - Air to Surface, Nuclear

ASY - Air Superiority

BFT - Basic Flying Training

CAS - Close Air Support

DSP - Defense Suppression

EC - Electronic Countermeasures

FAC - Forward Air Control

FC - Facility Checking

MSP - Missile Site Support

NT - Navigation Training

RS - Reconnaissance, Strategic

RT - Reconnaissance, Tactical

SAR - Search and Rescue

SAY - Surface to Air Recovery

SO - Special Operations

SOA - Special Operations, Airland

SOD - Special Operations, Airdrop

TR - Transition

TT - Tactical Training

WAS - Weather, Air Sampling

WR - Weather, Reconnaissance

Attachment 4

REFERENCES FOR CODES USED IN AIRCRAFT REPORTING

Serial Number. AFMAN 23-110, Vol 2

Mission, Design, and Series (MDS). Air Force Data Dictionary

Aircraft Configuration Identifier. Air Force Data Dictionary

Organization. Air Force Data Dictionary

Command. Air Force Data Dictionary

Station Location Code. Air Force Data Dictionary

Possessed Purpose Code. Air Force Data Dictionary

Local time of Change. Air Force Data Dictionary

Type Action.

- Gain-- Air Force Data Dictionary
- Loss-- Air Force Data Dictionary
- Termination-- Air Force Data Dictionary

Date:

- Year. Air Force Data Dictionary
- Consecutive julian day (self-explanatory).

Command of Assignment. Air Force Data Dictionary

Assignment Purpose Code. Air Force Data Dictionary.

Program Element Code. Air Force Data Dictionary

Attachment 5

SAMPLE MOVEMENT REPORT

UNCLASSIFIED

01 01 xxxxxxZ OCT 96 RR RR UUUULGMW

FROM: SM-ALC MCCLELLAN AFB CA//LABR//

TO: HQ AFMC WRIGHT PATTERSON AFB OH//LGM-AVDO//

INFO: (GAINING COMMAND/LOSING COMMAND AS APPLICABLE)

UNCLAS

SUBJ: AEROSPACE VEHICLE MOVEMENT REPORT RCS: HAF-LGM(AR)8003, REPORT NO. 01

AVPMDSVSNEAVLOCPUP
ACC5F61B-52H60-0000401 FEBXX
60-00005629JANXX
60-0000445 FEBXX
60-00005530 JANMINOT AFBX
60-00004710 JANXX
ACC5F61F-4D65-1249629 JANXMCCLELLAN AFB
65-1248010 FEBXX

DESDEPWDAARRBACTOD
X60-000028X60-000043XX
X60-00005860-000035
X60-000031
X65-1224265-1222565-12444XX

X65-1262365-12352
65-1234665-12278
65-12472

POC (NAME, GRADE, AUTOVON)
PATRICIA A. SHEPPARD, LABR
71431, 18 OCT 96
UNCLASSIFIED

Attachment 6

DOWNTIME CODES FOR C-E EQUIPMENT

NOTE: The codes listed here give the reasons for C-E equipment downtime, for use in reporting status and inventory. See chapter 6 of this instruction.

A6.1. A - Retrofit or Modification. Use when you need to remove an active equipment item from its assigned mission for the field or depot to perform a modification such as a TCTO, Class I modification, or antenna change out. State the TCTO number, modification performed, antenna replaced, and performing activity in a comment.

A6.2. B - Depot Maintenance Scheduled. Use for scheduled Air Logistics Center (ALC) overhaul, radome painting, and other such operations. Includes scheduled maintenance done by engineering installation (EI) units, centralized repair activities (CRA), mobile depot maintenance (MDM) teams, and contractors. State the type of maintenance and performing activity in a comment.

A6.3. C - Test (Orientation or Other). Use for all scheduled tests or evaluations except preventive maintenance inspections (PMIs). Use downtime code "F" for deficiencies discovered as a result of the test. Indicate the type of test or evaluation in a comment.

A6.4. D - Reserved for (Scheduled Maintenance).

A6.5. E - Preventive Maintenance. Use when the C-E equipment or channel is red or amber in its assigned mission because of scheduled PMIs required by Air Force, MAJCOM, or FOA directives. For deferred or incomplete PMIs, see downtime code "V". For discrepancies discovered during a PMI use downtime code "M". Comments are not required.

A6.6. F - Failed Flight Check or Operational Systems Check. Use to record the time active equipment is not capable of performing its assigned mission due to inability to pass flight inspection or periodic operational system checks. Also for all JCNs opened as a result of deficiencies discovered during test, orientation, or other procedure (downtime code "C"). Enter the work unit code of the failed component.

A6.7. G - Vehicle Out of Commission. Use when a vehicle that is an integral part of a C-E system is out of commission.

A6.8. H - Host Base Action. Use for reasons such as runway construction, building repair, and snow removal. State the specific action in a comment.

A6.9. I - Scheduled Maintenance. Use for scheduled maintenance not covered by other downtime codes. Add a comment to state the type of scheduled maintenance.

A6.10. J - Damage or Deterioration. Use for uncontrollable equipment damage caused by events other than weather or jamming (downtime codes "W" or "X"), such as natural disasters, vandalism, or riot. State the type and cause of the damage in a comment.

A6.11. K - Relocating/Resiting. Use for relocating or resiting of equipment for any reason except deployment and for runway changes of longer than 15 minutes. Describe the circumstances in a comment.

A6.12. L - Associated Equipment Malfunction. Use when associated or ancillary equipment that is not work-unit coded under the reportable equipment causes downtime. Does not apply to generators, air conditioners, or cables (see downtime codes "N", "P", and "Q"). Do not report circuit or distant end outages. Identify the equipment causing the outage in a comment.

A6.13. M - Equipment Malfunction. Use for equipment or component failure. Applies to components and equipment listed in the work-unit code manual for reportable equipment. Enter the work-unit code of the failed component. Add a brief description of the problem in a comment.

A6.14. N - Power Failure. Use when downtime occurs due to loss of commercial, local, or backup power. Includes downtime due to unstable power and any recovery time.

A6.15. O - Scheduled Software Maintenance. Use for scheduled downtime for software change, maintenance, or testing.

A6.16. P - Environmental Control. Use for failure of temperature, humidity, and dust control equipment (air conditioning) that is not part of the end item.

A6.17. Q - Cable Out. Use for downtime due to defective or cut cable. For a cable cut, use comments to describe the incident.

A6.18. R - Emergency Maintenance. Use when equipment doesn't meet technical order standards and you need to request outside assistance. Use a delay code until maintenance is actually being performed. Enter the WUC of the affected component or sub-system. State the type of assistance required in a comment.

A6.19. S - Software/Program Errors. Use when the equipment is down due to error in the operational program (software or firmware). Use this code only after you're sure that deficiencies in the operational program are causing the problem.

A6.20. T - Training. Use for downtime due to on-the-job training as approved by the Chief of Maintenance, Systems Flight Commander, or equivalent representative.

A6.21. U - Unknown. Use for initial reporting of suspected equipment failure or malfunction. Change to a more specific code when you determine the nature of the outage. Use this code also for equipment failure or malfunctions that you can't duplicate or clear while checking. Add comments to describe the reported symptoms or events. WUC is not required for this code.

A6.22. V - Military Priority. Use when equipment must be shut down due to safety hazard, interference with other equipment, or direction from higher headquarters. Does not apply to jamming (see downtime code "X"). Also, use for red or amber conditions that result from a deferred or incomplete PMI. Add comments to cite the authority for the outage.

A6.23. W - Atmospheric Disturbance or Weather. Use for downtime caused by severe weather or atmospheric conditions, such as anomalous propagation, high winds, heavy snow, or icing. Indicate the specific type of disturbance or weather condition in a comment.

A6.24. X - Jamming - Intentional/Unintentional. Use for downtime due to interfering electrical signals. Report only unclassified information in the comments.

A6.25. Y - Personnel Error. Use for downtime caused by operator error, such as incorrect switch or button activation or failure to follow established operations or maintenance procedures. Explain the error in a comment.

A6.26. Z - Frequency Change. Use for downtime due to a frequency change of more than 15 minutes.

Attachment 7

DELAY CODES FOR C-E EQUIPMENT

A7.1. A - Single Shift Maintenance. Use when equipment or channel has malfunctioned and personnel are not available to correct the problem. Stops when on-call technicians arrive or the next duty day begins. Does not apply when the maintenance function is staffed for 24-hour operation.

A7.2. B - Awaiting Flight Check. Use when an official flight check has been requested. Stops when an official certification flight check starts (see delay code "F"). Indicate the date and time of the scheduled flight check in a comment.

A7.3. C - Awaiting Technical Assistance from MAJCOM or FOA, AFMC, AFC SC, or Contractor. Used when you've requested technical assistance from an activity. Stops when the assistance arrives at the site. Indicate the type of assistance in a comment.

A7.4. D - Lack of Funds. Use when you lack organizational funds to order parts.

A7.5. E - Shift Change. Use when work stops due to shift changes that exceed 30 minutes.

A7.6. F - Flight Check. Use to record the time required to perform an official certification flight check.

A7.7. G - Awaiting System Check. Use when awaiting quality control check, post-deployment inspection, or initial checkout (other than a flight check). Use to report a delay for a systems check by other than maintenance. Indicate the type of system check required in a comment.

A7.8. H - Parts Awaiting Transportation. Use when parts are awaiting transportation from maintenance control or are enroute to a remote maintenance detachment or location.

A7.9. I - Parts Research. Use when work stops due to research exceeding 30 minutes.

A7.10. J - Supply Processing. Use for on-base supply processing time. Starts when the work center or maintenance control logs in the requisition to the standard base supply system (SBSS) and stops when supply issues the parts or SBSS notifies maintenance control or the unit representative that the base doesn't have the parts. Also use this code when components are in the Reparable Processing Center and are needed to clear an equipment malfunction.

A7.11. K - Off-Site Maintenance. Use when a part goes to off-base maintenance activities for repair or fabrication . Also use this code when an activity other than the owning or using activity repairs or fabricates equipment on-base. Identify the type of repair and activity in a comment.

A7.12. L - Reserved for Backorder Supply.

A7.13. M - Supply, MICAP Backorders. Use when base supply notifies maintenance that they must go to the ALC or lateral for parts identified as MICAP requirements. Stops when the part arrives at base supply. Indicate in comments the off-base requisition number, NSN or part number, part name, supply status

code, estimated shipping date, whether it was ordered NMC or PMC, and whether it went to depot or lateral.

A7.14. N - Supply, Other Backorders. Use when supply notifies maintenance that they must go to the depot or lateral for parts on non-MICAP requirements. Stops when the part arrives at base supply. Indicate in comments the off-base requisition number, NSN or part number, part name, supply status code, estimated shipping date, and whether it went to depot or lateral.

A7.15. O - Host Base Support. Use when you've requested support from an on-base activity, such as civil engineers. Stops when the assistance arrives at the site. Indicate the type of support in a comment.

A7.16. P - Supply, Local Purchase. Use when you obtain parts through local off-base channels. Starts when the condition is declared and stops when the parts arrive at the site. Indicate the part required and source in a comment.

A7.17. Q - Supply, Non-DoD. Use when a non-DoD activity, such as FAA, or a foreign government or military establishment, supplies parts for the equipment. Indicate part number, message or requisition number, and estimated delivery date in a comment.

A7.18. R - Supply, Contractor Support. Use when a contractor supplies the parts for the equipment. Indicate part number, message or requisition number, and estimated delivery date in a comment.

A7.19. S - Skill Not Available. Use when qualified maintenance personnel are not available to perform the required maintenance. Don't use this code when delay code "A" or "C" applies. Indicate in a comment why the required personnel aren't available.

A7.20. T - Travel Time. Use when maintenance delay is caused by travel of longer than 15 minutes between the maintenance organization and remote facility where the malfunction occurred.

A7.21. U - Tools, Test Equipment, and Technical Data Not Available. Use when maintenance doesn't have the tools, test equipment, or technical data needed to perform maintenance. State the tool, test equipment, or publication needed in a comment.

A7.22. V - Military Priority. Use when restoration of equipment to operational status is prevented by a directive of high military priority. Enter the directing authority in the "remarks" section.

A7.23. W - Delay For Weather. Use when you can't restore equipment due to weather conditions. Specify the weather conditions in a comment.

A7.24. X - Awaiting Transportation. Use when maintenance is delayed due to lack of transportation to the maintenance job location for tools, test equipment, technical data, and personnel.

A7.25. Y - Supply, Delivery Time. Use for a significant delay in delivery of parts from base supply to maintenance.

A7.26. Z - Other. Use when you encounter a delay that isn't covered by any other delay code. State the cause of the delay in a comment.

Attachment 8

HOW TO USE AF FORM 2691, AIRCRAFT/MISSILEEQUIPMENT PROPERTY RECORD

A8.1. Column A. Enter the julian date when the transaction is posted.

A8.2. Column B. Enter the supply account number followed by the request number from the custodian request log.

A8.3. Column C. Enter the quantity authorized, calculated by multiplying the quantity authorized by the number of aircraft or missiles.

A8.4. Column D. Enter the quantity due-in. Make due-in postings from the suspense copy of DD Form 1348-1A. Put a check mark in column D opposite the quantity originally due-in to indicate receipt or partial receipt of the items. ***NOTE:*** When due-ins are canceled, enter the quantity canceled in column D preceded by the abbreviation "Canx", and adjust the balance in column E.

A8.5. Column E. Enter the total quantity due-in. This entry represents the total quantity of due-ins recorded in Column D. Bring it up to date as changes occur.

A8.6. Column F. Enter the quantity received from any source.

A8.7. Column G. Enter the quantity turned in or transferred.

A8.8. Column H. Enter the quantity on hand. Enter a zero if there is none on hand. Make changes to this column when you receive, turn in, transfer, or terminate accountability for equipment with relief adjustment documents. Support changes to this column with a source document or relief documents prepared to end accountability for equipment signed out on AF Form 1297.

A8.9. Column I. Enter data required to show the location. In the next column, enter the quantity at that location. When equipment is signed for on AF Form 1297, enter the quantity in this column.

A8.10. Block 1. Enter the part number.

A8.11. Block 2. Optional. Enter the Expendability, Repairability, Recoverability and Category (ERRC) Code or leave blank.

A8.12. Block 3. When two or more possessed weapons systems are authorized common equipment items in the -21 TO, enter the MDS that applies in this block.

A8.13. Block 4. These numbers correspond with -21 line numbers.

A8.14. Block 5. Enter the stock number of the item.

A8.15. Block 6. Enter a descriptive nomenclature to identify the item. If the item is classified, enter the word "Classified" after the nomenclature.

A8.16. Block 7. Enter the unit of issue (for example, "pair," "set," or "each").

A8.17. Block 8. Optional. Enter the unit price or leave blank.

A8.18. Block 9. Enter the weapon system that applies. For equipment common to two or more weapon systems, refer to instructions for block 3. Enter the MDS for the largest number of weapon systems possessed in this block. (For example, if 18 F-16As and 36 F-16Cs are possessed, enter F-16C in this block and F-16A in block 3.)

Attachment 9

HOW TO USE AF FORM 2692, AIRCRAFT/MISSILE EQUIPMENT

Section A9A--Parts of the Form

A9.1. Box 1. Enter the organization title and the address of the activity initiating the transfer.

A9.2. Box 2. Leave blank.

A9.3. Box 3. Enter the MDS.

A9.4. Box 4. Leave blank.

A9.5. Box 5. Enter the organization title of the receiving activity. Also enter this note: "Aircraft/Missile Equipment for (MDS and serial numbers)."

A9.6. Box 6. Enter the authority for transfer.

A9.7. Box 7. Enter request number from AF Form 126.

A9.7.1. Column A . Enter the item number (1, 2, 3, and so forth).

A9.7.2. Column B. Enter stock or part number and nomenclature.

A9.7.3. Column C. Enter quantity authorized in the -21 TO per aircraft or missile.

A9.7.4. Column D. Enter the quantity installed or aboard the aircraft.

A9.7.5. Column E. Enter quantity shipped separately through transportation.

A9.7.6. Column F. The organization receiving the equipment enters the quantity received.

A9.7.7. Column G. Enter the reason or authority for shortages, if required (see paragraph **9.14.**).

A9.8. Box 8. Signature of official tasked to perform the final verification before the aircraft departs.

A9.9. Box 9. Enter the date of verification.

A9.10. Box 10. Signature of the official tasked to perform the acceptance inventory.

A9.11. Box 11. Enter the date of the acceptance inventory.

A9.12. Box 12. The receiving organization enters the request number from AF Form 126.

NOTE: After the last entry, the accountable officer preparing the form completes the certification at the bottom of the form.

Section A9B--Steps in Preparing and Processing AF Form 2692

A9.13. Accountable -21 Support Function:

- Prepares five copies of AF Form 2692.
- Keeps copy 5 in suspense file and destroys it when PS&D returns copy one.
- Sends copies 1 through 4 to PS&D.

A9.13.1. -21 Support Function Project Personnel:

- Verify that all equipment authorized in the -21 TO, or all equipment specified in the transfer directive, is listed on AF Form 2692.
- Task the maintenance officers of accountable functions to make an inventory at least 1 day before the scheduled departure of the aircraft. The maintenance officer will:
- Verifies that all equipment on AF Form 2692 is installed or aboard.
- After verifying that the equipment being transferred is installed or aboard, signs all fourcopies.
- Return copy 1 to the accountable function.
- Mail copy 2 to the PS&D of the gaining organization.
- Place copy 3 in the aircraft records binder for the aircraft being transferred.
- Hold copy 4 for 30 days in case the gaining organization needs to resolve discrepancies found during the acceptance inventory.

A9.13.2. Gaining Organization:

- Uses copy 2 or 3 of AF Form 2692 to conduct the acceptance inventory.
- If there are shortages, reviews AFTO 781-series forms to determine if the missing equipment was removed en route.
- If the equipment was removed at an en route base (the transferring organization didn't ship it), requests assistance from their MAJCOM headquarters in resolving the shortage.
- Adjusts AF Forms 2691 to show the equipment that it gained in the transfer.

Attachment 10

HOW TO USE DD FORM 1149, REQUISITION AND INVOICE/SHIPPING DOCUMENT

Section A10A--Parts of the Form

A10.1. Box 1. Enter organization e.g. MAJCOM and base, Defense Plant Representative Office (DPRO), etc., possessing the aircraft..

A10.2. Box 2. Enter HQ AFMC LGM-AVDO, Wright Patterson AFB, OH 45433.

A10.3. Box 3. Enter the name and address of the recipient indicated in the assignment directive.

A10.4. Box 4. Enter Foreign Military Sales (FMS) case designator, grant aid Reports Control Number (RCN), etc., if known.

A10.5. Box 5, 6, ,7 and 8. Leave blank.

A10.6. Box 9. Enter HQ USAF project number e.g., FMS 9F-35 or MAP9T-47 and the assignment directive number e.g., 79-635.

A10.7. Box 10. If shipment is by airlift or surface, make sure the person shipping the aircraft signs. Otherwise leave blank.

A10.8. Box 11a. Leave blank.

A10.9. Box 11b. Leave blank.

A10.10. Box 12. For shipment by airlift or surface, enter the date of shipment. Otherwise leave blank.

A10.11. Box 13. Indicate airlift or surface. Otherwise leave blank.

A10.12. Box 14. For shipment by airlift or surface, enter the initial bill of lading or manifest number.

A10.13. Box (a). Leave blank.

A10.14. Box (b). Enter MDS and serial number. If being ferried, enter the signature block of the ferry pilot and date of signature.

A10.15. Box (c) - (i). Leave blank.

A10.16. Box 15 - 17. Leave blank.

A10.17. Box 18. Self-Explanatory. Use is optional.

A10.18. Box 19. Leave blank.

Section A10B--Preparing and Processing DD Form 1149, Requisition and Invoice/Shipping Document

A10.19. Accountable Officer:

- Makes enough copies of DD Form 1149 to complete all steps.
- Sends all copies to the transportation office with the items being shipped.

A10.19.1. Transportation Officer:

- Assigns transportation control numbers (TCN) and signs all copies of DD Form 1149.
- Sends appropriate copies to the gaining traffic management office with the equipment being shipped.
- Returns three copies to the accountable officer.

A10.19.2. Accountable Officer:

- Sends two copies to the PS&D.
- Keeps one copy in suspense.

A10.19.3. Plans & Scheduling and Documentation (PS&D):

- Sends one copy to the PS&D of the gaining unit.
- Holds one copy for 60 Days in case the gaining unit needs help finding the equipment in transportation channels.

Attachment 11

SAMPLE AIRCRAFT GAIN MESSAGE

UNCLASSIFIED

01 01 101331Z JUN 96 PP RR UUUU ZYUW
FROM 142 FIG PORTLAND OR//MAMP//
TO 1OSS LANGLEY AFB VA//OSOS//
INFO HQ ACC LANGLEY AFB VA//LGQP AVDO//
HQ AFMC WPAFB OH//LGM-AVDO//
ANGRC ANDREWS AFB MD//LGM-AVDO//
9AF SHAW AFB SC//LGMQ//
WR-ALC ROBINS AFB GA//LBPL//LFOS//

UNCLAS

SUBJ: AFI 21-103, Aerospace Equipment Possession Change Report, HAF-LGM (AR)9480: GAIN.

(1) (2) (3) (4) (5) (6) (7) (8) (9)
8100000022/961421307(961421507Z)/F015C/ANG/CC/0142FINGP/TQJF/CC/GB/

(10) (11) (12)(13)(14) (15)
MUHJACC/ANG/019755/22 MAY 96/ASSIGNMENT CHANGE/NAME OF AVDO, DSN

SAMPLE AIRCRAFT GAIN MESSAGE (SEE PARAGRAPH **2.16.**)

INSTRUCTIONS

Addressees:

TO: Losing Organization

INFO: Losing command HQ and intermediate command HQ. Gaining command HQ and intermediate command HQ. Appropriate Air Logistics Center (ALC) System Program Director (SPD) and HQ AFMC/ LGM-AVDO.

SUBJECT:

AFI 21-103 Aerospace Equipment Possession Change Report, HAF-LGM (AR)9480: GAIN.

Required Information:

1. Serial number of the aircraft.

2. Date of gain (last two digits of year plus consecutive julian day) and local time of change, (followed by date and Zulu time) date and Zulu time of change shown in the loss and gain messages must agree.

3. MDS and configuration identifier (if applicable).

4. Assigned command.

5. Assignment purpose identifier.

6. Gaining organization.

7. Gaining organization station location code.

8. Gaining organization possession purpose identifier.

9. Type action code. (GB for a gain)

10. Losing organization station location code and command.

11. Command gaining aircraft.

12. Airframe hours.

13. Date of next major scheduled inspection due (time/date and type, i.e., phase, periodic, major or minor isochronal, etc.) (MAJCOM option, leave blank if not used).

14. Reason for movement, i.e., assignment change, PDM, ACI, etc.

15. Name and DSN telephone number of AVDO initiating message.

Attachment 12

SAMPLE AIRCRAFT LOSS MESSAGE

UNCLASSIFIED

01 01 101331Z JUN 96 PP RR UUUU ZYUW

NO
FROM 1OSS LANGLEY AFB VA//OSOS//
TO 142 FIG PORTLAND OR//MAMP//
INFO HQ ACC LANGLEY AFB VA//LGQP-AVDO//
HQ AFMC WPAFB OH//LGM-AVDO//
ANGRC ANDREWS AFB MD//LGM-AVDO//
9AF SHAW AFB SC//LGMQ//
WR-ALC ROBINS AFB GA//LBPL//LFOS//

UNCLAS

SUBJ: AFI 21-103 Aerospace Equipment Possession Change Report, HAF-LGM (AR)9480: LOSS.

(1) (2) (3) (4) (5) (6) (7) (8) (9)
8100000022/961421307(961421507Z)/F015C/ANG/CC/0142FINGP/TQJF/CC/LB/

(10) (11) (12) (13) (14) (15)
MUHJACC/ANG019755/22 MAY 96/ASSIGNMENT CHANGE/NAME OF AVDO, DSN

SAMPLE AIRCRAFT LOSS MESSAGE (SEE PARAGRAPH **2.17.**)
INSTRUCTIONS

Addressees:

TO: Gaining organization.

INFO:

- Gaining command HQ and intermediate command HQ.
- Losing command HQ and intermediate command HQ.
- Appropriate ALC system program manager (SPD)
- HQ AFMC//LGM-AVDO//

Subject

AFI 21-103, Aerospace Equipment Possession Change Report, HAF-LGM (AR)9480: LOSS.

Required Information:

1. Serial number of the aircraft.

2. Date of loss (last two digits of year plus julian day) and local time of change (followed by date and Zulu time). Dates and zulu times of change shown in the loss and gain messages must agree.

3. MDS and configuration identifier (if applicable).

4. Assigned command.

5. Assignment purpose identifier.

6. Losing organization.

7. Losing organization station location code.

8. Losing organization possession purpose identifier.

9. Type action code ("LB" for a loss).

10. Gaining organization station location code and command.

11. Command losing aircraft.

12. Airframe hours.

13. Date of next major scheduled inspection due (time/date and type, i.e., phase, periodic, major or minor isochronal, etc.) (MAJCOM option, leave blank if not used.

14. Reason for movement (assignment change, PDM, ACI, and so on).

15. Name and DSN telephone number of AVDO who is initiating the message.

Attachment 13

SAMPLE AIRCRAFT TERMINATION MESSAGE

UNCLASSIFIED

01 01 101331Z JUN 96 PP RR UUUU ZYUW

NO

FROM 1OSS LANGLEY AFB VA//OSOS//

TO HQ AFMC WPAFB OH//LGM-AVDO//

INFO HQ ACC LANGLEY AFB VA//LGQP-AVDO//

HQ AFMC WPAFB OH//LGM-AVDO//

9AF SHAW AFB SC//LGMQ//

WR-ALC ROBINS AFB GA//LBPL//LFOS//

OC-ALC TINKER AFB OK//TISC//

HQ USAF WASH DC//PED//

UNCLAS

SUBJ: AFI 21-103 Aerospace Equipment Termination Report, HAF-LGM(AR)9481.

(1) (2) (3) (4) (5) (6) (7) (8) (9)

8100000022/961422400(961430300Z)/F015C/ACC/CC/0001FTRWG/MUHJ/CC/T5/

(10)(11)(12)

ACC/ ENGINE SERIAL NUMBERS/NAME AND RANK OF OG/CC

SAMPLE TERMINATION MESSAGE (See paragraph **2.18.**)

INSTRUCTIONS

Addressees:

TO: HQ AFMC WRIGHT-PATTERSON AFB OH/ LGM-AVDO

INFO:

- Possessing and assigned command HQ and, if applicable, intermediate command HQ.
- HQ USAF/PED.
- Appropriate ALC System Program Director (SPD).
- Comprehensive Engine Management System (CEMS) Office, OC-ALC/MMDC
- HQ AFMC/LGM-AVDO//

SUBJECT:

AFI 21-103, Aerospace Equipment Termination Report, HAF-LGM(AR)9481.

Required information:

1. Serial number of the aircraft.
2. Date of termination (last two digits of year plus consecutive julian day) and local time of change which equals (2400Z).
3. MDS and configuration identifier (if applicable).
4. Assigned command.
5. Assignment purpose identifier.
6. Possessing organization.
7. Possessing organization station location code.
8. Possession purpose identifier.
9. Type termination code for ADN message.
10. Possessing command.
11. Serial number(s) of primary propulsion engine(s) installed on terminated aircraft.
12. Name and rank of Operations Group Commander or designated representative.

Attachment 14

SAMPLE POSSESSION PURPOSE IDENTIFIER CODE CHANGE MESSAGE

CLASSIFIED

01 01 101331Z JUN 96 PP RR UUUU ZYUW

NO

FROM 1OSS LANGLEY AFB VA//OSOS//

TO HQ ACC LANGLEY AFB VA//LGQP-AVDO//

INFO 9AF SHAW AFB SC//LGMQ//

HQ AFMC WPAFB OH//LGM-AVDO//

WR-ALC ROBINS AFB GA//LBPL//LFOS//

UNCLAS

SUBJ: AFI 21-103 Aerospace Equipment Possession Purpose Identifier Code Change Report, RCS: HAF-LGM(AR)9482.

(1) (2) (3) (4) (5) (6) (7) (8) (9)

8100000022/961421307(961421507Z)/F015C/ACC/CC/0001FTRWG/MUHJ/CC/LF/

(10) (11) (12) (13)

BQ/ACC/REMARKS/NAME OF AVDO, DSN

SAMPLE POSSESSION PURPOSE IDENTIFIER CODE CHANGE MESSAGE

(See paragraph **2.19.**)

INSTRUCTIONS

Addresses:

TO: MAJCOM AVDO/Office symbol

INFO:

- Intermediate command HQ/Office symbol.
- Appropriate ALC System Program Director (SPD).
- HQ AFMC/LGM-AVDO

SUBJECT:

AFI 21-103, Aerospace Equipment Possession Purpose Identifier Code Change Report, RCS: HAF-LGM(AR)9482.

Required Information:

1. Serial number of the aircraft.
2. Date of possession purpose identifier change (last two digits of the year plus consecutive julian day) and local time of change (followed by date and zulu time).
3. MDS and configuration identifier (if applicable).
4. Assigned command.
5. Assignment purpose identifier.
6. Possessing organization.
7. Station location code.
8. Possession purpose identifier from which the aircraft is changing.
9. Type action code ("LF").
10. Possession purpose identifier to which aircraft is changing.
11. Possessing command.
12. Remarks: Reason for change.
13. Name and DSN telephone number of AVDO initiating change and message.

Attachment 15

SAMPLE MDS/CONFIGURATION IDENTIFIER CHANGE

UNCLASSIFIED

01 01 101331Z JUN 96 PP RR UUUU ZYUW

NO

FROM 4OSS SEYMOUR JOHNSON AFB NC//OSOS//

TO HQ ACC LANGLEY AFB VA//LGQP-AVDO//

INFO 9AF SHAW AFB SC//LGMQ//

HQ AFMC WPAFB OH//LGM-AVDO//

OO-ALC HILL AFB UT//LACS//LAMPB//

UNCLAS

SUBJ: AFI 21-103, Aerospace Equipment MDS/Configuration Identifier Change Report, RCS: HAF-LGM(AR)9483.

(1) (2) (3) (4) (5) (6) (7) (8) (9)

8100000022/961421307(961421507Z)/F015E/ACC/CC/0004FTRWG/VKAG/CC/LC/

(10) (11) (12)

F015EP S/ACC/NAME OF AVDO, DSN

SAMPLE OF MDS CONFIGURATION CHANGE MESSAGE (See paragraph **2.20.**)

INSTRUCTIONS

Addressees:

TO: MAJCOM AVDO//OFFICE SYMBOL

INFO:

- Intermediate command HQ.
- HQ AFMC/LGM-AVDO.
- Appropriate ALC System Program Director (SPD).

SUBJECT:

AFI 21-103, Aerospace Equipment MDS/Configuration Identifier Change Report, RCS: HAF-LGM(AR)9483.

Required Information:

1. Serial number of the aircraft.
2. Date of change (last two digits of the year plus consecutive julian day) and local time of change (followed by date and zulu time).
3. Old MDS/configuration identifier.
4. Assigned command.
5. Assignment purpose identifier.
6. Possessing organization.
7. Station location code.
8. Possession purpose identifier.
9. Type action code (LC).
10. New MDS/configuration identifier.
11. Possessing command.
12. Name and DSN telephone number of AVDO who is initiating the message.

Attachment 16

IC 98-1 TO AFI 21-103, EQUIPMENT INVENTORY, STATUS, AND UTILIZATION REPORTING

SUMMARY OF REVISIONS

This interim change (IC) 98-1 provides additional guidance for reporting aircraft maintenance status.

2.23.3. Scheduled or unscheduled maintenance stops when you finish maintenance according to applicable technical data using the following criteria:

- When all ground operations checks are complete.
- If in-flight operational checks are required by technical data, maintenance status will stop when all ground checks leading up to the in-flight operational check are completed.
- When you verify that a lack of parts limits the mission.

2.23.3.1. If a Functional Check Flight (FCF) is required IAW T.O. 1-1-300, -6 FCF requirements, or any other applicable technical data, maintenance status will not stop until the FCF is completed.

Attachment 17 (Added-AETC)

AETC-UNIQUE MISSION CODES

AAD	Aerial Delivery
ADA	Aerial Delivery, Cargo
ADB	Aerial Delivery, Cargo and Personnel
ADP	Aerial Delivery, Personnel
ALM	Airlift Evacuation, Medical
ALR	Airlift, Air Refueling
AMC	Airborne Mission Commander
ALP	Airland, Palletized Cargo
ALR	Airland, Palletized Cargo, Air Refueling
ARC	Airland, Rolling Cargo
ARD	Airland, Rolling Cargo, Air Refueling
CCT	Combat Crew Training
CEL	Celestial Navigation Mission (Day and Night)
CFI	Central Flight Instructor
CFM	Cargo Familiarization
CNT	Contact
CNV	Conventional
EP	Emergency Procedures
FOR	Formation
IMC	Instrument Meteorological Conditions
ITQ	Instructor Training School Initial Qualification
LCL	Local Area
LOL	Low Level
MAN	Marine Aerial Navigation School
NDF	Night Drop Familiarization
NTA	Navigation Training, Advanced
NTB	Navigation Training, Basic
NVG	Night Vision Goggles
OWM	Over-Water Mission
PAV	PAVE LOW
PF	Proficiency Flying Time
PPS	Profile (Area)/Pattern (VMC or IMC) Sortie
REM	Remote
TF	Terrain Following
TTD	Tactical Training, Day
TTN	Tactical Training, Night
VMC	Visual Meteorological Conditions
XC	Off-Station Sortie (dual or solo)
XCT	Off-Station Sortie, Training

Attachment 18 (Added-AETC)

COMMONLY USED POSSESSION PURPOSE IDENTIFIER CODES

Table A18.1. (AETC) Field and Depot Level Maintenance Codes.

ITEM	A Code	B Approval Authority	C Definition
FIELD LEVEL MAINTENANCE CODES			
1	BJ	T.O. 00-25-107. Request will be submitted prior to use and must be coordinated through the system manager and the MAJCOM AVDO.	Crash/Battle Damage Awaiting AFMC Assistance or Decision (Note 1): Aerospace vehicles and trainers for which AFMC assistance has been requested for repair of crash or battle damage and will be effective upon submission of AFTO Form 92, **Aerospace Vehicle Condition Inspection Report,** IAW T.O. 1-1-638 and will apply until actual transfer of possession to AFMC.
2	BK	AFI 21-103/AETC Sup 1	Command Programmed Maintenance (Note 1): Aerospace vehicle being processed through a major command-directed funded and operated maintenance program (i.e., command central corrosion facility). Not used when aircraft are undergoing unscheduled maintenance, scheduled inspections, or TCTO. **Must be approved by the MAJCOM headquarters prior to use.**
3	BL	A formal request will be submitted to the system manager and MAJCOM AVDO prior to use.	Extended Transit Maintenance (Note 1): Applies to aerospace vehicles when transient maintenance requires more than 7 days to repair the transient aerospace vehicle. The gain will be reported by the organization responsible for the maintenance.
4	BN	A formal request will be submitted to the system manager and MAJCOM AVDO prior to use.	Crash Damage Base (Note 1): Aerospace vehicles and trainers on which AFMC assistance is not required for repair of crash damage.
5	BQ	T.O. 00-25-107. Request will be submitted prior to use and must be coordinated through the system manager and the MAJCOM AVDO.	Major Maintenance Awaiting AFMC Decision/Action (Note 1): Aerospace vehicles and trainers for which AFMC has been requested to provide repair assistance beyond the possessing command's ability. Use will begin when the aerospace vehicle or trainer is no longer usable for its intended purpose and the request for assistance is submitted. The use will continue until the decision is provided the repair action taken or possession transferred to AFMC. Crash damaged aerospace vehicles will not be reported as BQ.

ITEM	A Code	B Approval Authority	C Definition
6	BR	A formal request will be submitted to the system manager and MAJCOM AVDO prior to use.	Major Maintenance Awaiting Parts (Note 1): Aerospace vehicles and trainers that require major maintenance for which the necessary major components have not been programmed and are not available in AF stocks. Use of this code is restricted to large-scale programs, e.g., replacement of all T-38 wings, and not to single isolated incidents. Use of the code must be agreed upon by both the operating MAJCOM and the system manager. Aerospace vehicles and trainers in BR status are not MICAP reportable.
7	BT	AFI 21-103/AETC Sup 1	Aerospace Vehicle Transfer (Note 1): Applies to aerospace vehicle transfers for the period of time that the aircraft is not available to accomplish its assigned mission. To be used for reporting during the period of transfer beginning with preparation for transfer through recovery after arrival at the new location. Aircraft assigned this code will not be considered available for generation during operational readiness inspection (ORI) and will not be chargeable to unit NMC/PMC rates. **Use of this code is optional, but must be approved by MAJCOM headquarters prior to use.**
DEPOT LEVEL MAINTENANCE CODES			
8	BU	A formal request will be submitted to the system manager and MAJCOM AVDO prior to use.	Depot level maintenance - depot level work performed at unit level, when AFMC has formally acknowledged acceptance of the responsibility to repair the aerospace vehicle IAW T.O. 00-25-107 and ALC has authorized repair by possessing unit. Work is performed by the owning unit to expedite the repair action when the unit possesses the technical expertise and support equipment, and is qualified to accomplish the repair. Use of this code must be agreed upon by both the operating MAJCOM and the system program manager. The use will continue until the repair action is complete or the possession is changed to flyable code.
9	BW		Weather/Bird Strike Damage Awaiting AFMC Assistance or Decision (Note 1): Aerospace vehicle has been requested for repair of aircraft damage and will not be effective upon submission of AFTO Form 92, IAW T.O. 1-1-638 and will apply until actual transfer of possession to AFMC.
10	BX		Weather/Bird Strike Damage Base (Note 1): Aerospace vehicles and trainers on which AFMC assistance is not required for repair of aircraft damage.

ITEM	A Code	B Approval Authority	C Definition
11	DJ		Depot Level Maintenance Possession—Depot Level Work (Note 1): Applies to aerospace vehicles awaiting depot-level work either at a depot, contract facility, or the base organization location (to be performed by depot, contract, or rapid area maintenance [RAM]/field teams), or awaiting shipment to the appropriate repair facility. To be used when AFMC assistance has been requested and AFMC has formally acknowledged acceptance of the responsibility to repair the aerospace vehicle IAW T.O. 00-25-107.
12	DK		Contract Work (Note 1): Aerospace vehicles and trainers on contract to a civilian repair facility (domestic or foreign) for the performance of programmed depot maintenance (PDM), repair, modification, modernization, instrumentation, T.O. compliance reconditioning. Aerospace vehicles receiving maintenance as DK will be reported as possessed by AFMC.
13	DM		Depot Level Maintenance Possession—Depot Level Work RAM/Field Teams (Note 1): Aerospace vehicles undergoing maintenance beyond organizational/ intermediate level capability. Includes depot-level work being performed at the base organization location by depot, contract, or RAM/field teams.
14	DO		Depot Level Maintenance Possession—Depot Work (Note 1): Aerospace vehicles and trainers at Air Force depots (domestic or foreign) undergoing programmed depot maintenance (PDM), repair, modification, modernization, technical order compliance instrumentation and reconditioning.
15	DR		Post Depot/Contractor Maintenance (Note 1): Applies to aerospace vehicles after depot work (DO or DN), contract work (DK), or RAM/field team (DM) maintenance have been completed and the vehicle is in preparation for functional check flight (FCF) or delivery to the organization that will possess it. To be used from the time when the aircraft has been released for FCF, during FCF, and the maintenance required after the FCF.
16	TF		Training: Aerospace vehicles assigned or possessed to accomplish student training, combat crew training, or dissimilar air combat training, or combat crew training.

ITEM	A Code	B Approval Authority	C Definition
17	TJ		Ground Instruction Active (Note 2): Trainer and temporarily assigned or possessed aerospace trainers and temporarily assigned aerospace vehicles used for ground instruction purposes.
18	TX		Ground Instruction Inactive (Note 2): Aerospace vehicles normally with a G prefix permanently assigned or possessed for ground instructional purposes.

NOTES:

1. For use as possession reporting identifiers only.
2. For use as both assignment and possession reporting identifiers.

Attachment 19 (Added-AETC)

T-1A MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)				
WUC	**System/Subsystem**		**LCL**	**IMC**	**VMC**	**FOR**	**AR**
11***	Airframe	X	X	X	X	X	X
12***	Flight Deck	X	X	X	X	X	X
12***	Cabin/Galley	X1					
13***	Landing Gear	X	X	X	X	X	X
14***	Flight Control	X	X	X	X	X	X
23***	Turbofan Powerplant	X	X2	X2	X2	X2	X2
41A**	Bleed Air Mode Control Switch	X	X3	X3	X3	X3	X3
41AC*	Vapor Cycle Cooling	X					
41D**	Pressure Control System	X	X	X	X	X	X
41E**	Ice/Rain Removal System	X	X4	X4	X4	X4	X4
42***	Electrical Power System	X	X	X	X	X	X
44***	Exterior Lights	X	X5	X5	X5	X5	X5
44***	Interior Lights	X6	X6	X6	X6	X6	X6
45***	Hydraulic Power Supply	X	X	X	X	X	X
46***	Fuel System	X	X	X	X	X	X
47***	Oxygen System	X	X	X	X	X	X
49***	Miscellaneous Utilities	X	X	X	X	X	X
51***	Flight Instruments	X	X	X	X	X	X
51BA*	Digital Clock	X	X7	X7	X7	X7	X7
51BA*	Standby Horizon Indicator	X	X	X	X	X	X
51BB*	Accelerometer	X	X	X	X	X	X
57A**	Autopilot	X					
57A9*	Stability Augmentation	X	X8	X8	X8	X8	X8
57B**	Position Computing	X					
57C**	Attitude and Direction	X	X	X	X	X	X
62***	VHF Radio	X	X9	X9	X9	X9	X9
63***	UHF Radio	X	X	X	X	X	X
64***	Interphone	X	X	X	X	X	X
65***	IFF (Modes A, C, and S)	X	X10	X10	X10	X10	X10
71***	Radio Navigation	X	X	X	X	X	X
71CD*	GPS	X11					X
72***	Radar Navigation	X					
91***	Emergency Equipment	X	X	X	X	X	X

Legend:

AR Air Refueling
FOR Formation
IMC Instrument Meteorological Conditions
LCL Local Area
VMC Visual Meteorological Conditions

NOTES:

1. Upper and or lower decanter not required for flight. Toilet not required for flight.
2. Aircraft with engines requiring special oil analysis surveillance and or sampling are restricted to local area missions.
3. Manual temperature control required.
4. Required if icing conditions are forecast or present.
5. Two of three strobes must operate for all missions.
6. Not including passenger area.
7. One clock must be operational.
8. Not applicable if flight planned below 28,000 feet.
9. May be reported PMC if local conditions allow.
10. Restricted to day local pattern - only missions with local air traffic control approval.
11. If equipped.

Attachment 20 (Added-AETC)

T-37B MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)			
WUC	**System/Subsystem**		**VMC**	**LCL**	**IMC**	**XCT**
11***	Airframe	X	X	X	X	X
111**	Windshield and Canopy	X	X1	X1	X1	X1
12***	Cockpit	X	X2	X2	X2	X2
13***	Landing Gear/Brakes	X	X	X	X	X
14***	Flight Controls	X	X3	X3	X3	X3
23***	Turbojet Powerplant	X	X4	X4	X4	X4
411**	Air-Conditioning and Defrosting	X	X2	X2	X2	X2
42***	Electrical Power Supply	X	X	X	X	X
441**	Exterior Lights	X			X5	X5
44***	Interior Lights	X			X	
451**	Hydraulic and Pneumatic System	X	X	X	X	X
46***	Fuel System	X	X	X	X	X
47***	Oxygen System	X	X2	X2	X2	X2
491**	Fire Detection and Overheat System	X	X	X	X	X
511**	Flight Instrumentation	X	X5	X5	X5	X5
512**	Navigation Instrumentation	X	X6	X6	X6	X6
51212	Clock	X2				
515**	Electrical System (DC)	X	X	X	X	X
516**	Utility Instrumentation	X	X	X	X	X
517**	Fuel Quantity System	X	X	X	X	X
55B**	MXU-553 Life History Recorder	X7				
633**	UHF Radio System	X	X	X	X	X
641**	Interphone System	X	X2	X2	X2	X2
65***	IFF (Including Mode C)	X	X8	X8	X8	X8
712**	DME	X		X9	X8	X8
713**	Instrument Landing System	X			X	X
713**	VHF/VOR	X	X	X	X	X
91***	Emergency Equipment	X	X	X	X	X
97A00	Egress System	X	X	X	X	X

Legend:

IMC Instrument Meteorological Conditions

LCL Local Area

VMC Visual Meteorological Conditions

XCT Off-Station Sortie, Training

NOTES:

1. Aircraft with canopy or windscreen distorted/crazed within T.O. limits are restricted to dual day local visual meteorological conditions (VMC) or no formation flights (rated pilot decision).
2. Aircraft may be flown solo with discrepancies in the right cockpit that do not affect safety of flight. Restricted to solo if only right interphone is inoperative. Clock is required for low-level missions. Air-conditioning manual mode required for all missions.
3. For flap blowup check due, aircraft is restricted to dual or solo local VMC with a rated pilot. For lift computer adjustment due, aircraft is restricted to local VMC with a pilot qualified to adjust the lift computer in left seat.
4. Restricted to local with a rated pilot for first flight when an engine is replaced with a non-FCF engine (SUPT only). Aircraft with engines requiring special oil analysis surveillance and or sampling are restricted to local mission.
5. Inoperative landing and taxi light restricted to day local VMC (dual or solo) if no instrument or straight-in approaches are planned. One anticollision beacon must fully operate for day flying if either strobe is not functional. Both anticollision beacons or both strobes must operate for night flying. Both anticollision beacons must operate for local night flying.
6. For compass swing due, aircraft is restricted to dual day local VMC or solo with a rated pilot.
7. If installed.
8. Restricted to day local VMC for home field pattern only missions with local air traffic control approval. Self-test feature not required if system is operative.
9. Restricted to dual day local or solo only with a rated pilot.

Attachment 21 (Added-AETC)

T-38A/AT-38B MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**VMC**	**LCL**	**IMC**	**XCT**	**AAC**	**ASC**
11***	Airframe	X	X	X	X	X	X	X
11***	Windshield/Canopy	X	X1	X1	X1	X1	X1	X1
1152*	Pylon	X2					X	X2
121**	Cockpit and Controls	X	X1/3	X1	X1/3	X1	X	X
13***	Landing Gear and Brakes	X	X	X	X	X	X	X
14***	Flight Controls	X	X	X	X	X	X	X
23***	Turbojet Powerplant/Gearboxes	X	X4	X4	X4	X4	X4	X4
41***	Air-Conditioning, Pressurization and Anti-Ice Control	X	X5	X5	X5	X5	X5	X5
42***	Electrical System	X	X	X	X	X	X	X
4411*	Exterior Lights	X	X6	X6	X6	X6	X6	X6
442**	Interior Lights	X7			X	X		
45***	Hydraulic and Pneumatic Power	X	X	X	X	X	X	X
46***	Fuel System	X	X	X	X	X	X	X
47***	Oxygen System	X	X	X	X	X	X	X
49***	Miscellaneous Utilities	X	X	X	X	X	X	X
511**	Instruments	X	X1/8	X1/8	X1/8	X1/8	X	X
51111	Accelerometer	X	X9	X9	X9	X9	X9	X9
51211	Clock	X	X10	X10	X10	X10	X10	X10
513**	Angle of Attack (AOA)	X	X11	X11	X11	X11	X11	X11
552**	AVTR	X					X12	X12
55B**	Recording Equipment	X12						
63B**	UHF Radio, AN/ARC-164	X	X1	X1	X1	X1	X1	X1
64B**	Interphone, AN/AIC-18	X	X1	X1	X1	X1	X1	X1
65A**	IFF	X	X13	X13	X13	X13	X13	X13
65C**	AIMS, AN/APX-64	X	X	X	X	X	X	X
71B**	Instrument Landing System	X			X	X		
71Z**	TACAN	X	X	X	X	X	X	X
742**	Optical Sight	X					X2	X2
75***	Weapons Delivery	X					X2	X2
91***	Emergency/Personnel Equipment	X	X1	X1	X1	X1	X1	X1
97***	Egress System	X	X	X	X	X	X	X

Legend:

AAC Air to Air, Conventional
ASC Air to Surface, Conventional
IMC Instrument Meteorological Conditions
LCL Local Area
VMC Visual Meteorological Conditions
XCT Off-Station Sortie, Training

NOTES:

1. Restricted to solo only with rear cockpit discrepancies that do not affect safety of flight, including rear canopy visual distortion, discoloration, or crazing within technical order limits (rated pilot decision) and inoperative interphone.
2. AT-38B only when required.
3. Blind flying hood is restricted from IMC missions. ***NOTE:*** Not required for AT-38 missions.
4. Restricted to local and rated pilot for first flight when an engine is replaced with a non-FCF engine (SUPT only). Aircraft with engines requiring special oil analysis surveillance and or sampling are restricted to local missions.
5. Air-conditioning manual mode required if auto mode is inoperative.
6. Landing and taxi light portion of system required for all missions. Restricted to day missions as long as one beacon operates. Both beacons must be operational for night missions.
7. Interior lights required for night sorties.
8. Restricted to dual day local VMC or solo with a rated pilot for compass swing due.
9. Restricted to instrument and or navigation missions when rear cockpit accelerometer is inoperative. FCP accelerometer required for all AAC and ASC AT-38B missions.
10. FCP clock is required for all low-level missions.
11. AOA not required for aircraft being input to or returning from program depot maintenance or contract field team repair facilities.
12. If installed. ***NOTE:*** Not required for all training syllabuses.
13. Restricted to day local pattern only missions with local air traffic control approval. Self-test feature not required if system is operative. A flight with an inoperative IFF or SIF is authorized for formation sorties with a minimum of one operable IFF or SIF per element.

Attachment 22 (Added-AETC)

T-43A MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)						
			ITQ	LOL	OWM	NTB	NTA	CEL	MAN
11***	Airframe	X	X	X	X	X	X	X	X
12***	Cockpit/Training Compartment	X	X	X	X	X	X	X	X
13***	Landing Gear/Brakes	X	X1	X1	X1	X1	X1	X1	X1
14***	Flight Controls	X	X	X	X	X	X	X	X
14G**	Automatic Spoiler System	X	X2	X2	X2	X2	X2	X2	X2
23T**	Turbofan Power Plant	X	X3	X3	X3	X3	X3	X3	X3
24***	Auxiliary Power Unit	X4			X				
41***	Air-Conditioning, Pressurization, and Anti-Ice System	X	X5/6	X5/6	X5/6	X5/6	X5/6	X5/6	X5/6
42***	Electrical Power Supply	X	X7	X7	X	X7	X7	X7	X
44***	Exterior Lights	X	X8	X8	X8	X8	X8	X8	X8
45***	Hydraulic/Pneudraulic System	X	X	X	X	X	X	X	X
46***	Fuel System	X	X9	X9	X9	X9	X9	X9	X9
47***	Oxygen System	X	X	X	X	X	X	X	X
49***	Fire Detection/ Extinguishing System	X	X	X	X	X	X	X	X
51A**	Flight/Navigation Instruments	X	X	X	X	X	X	X	X
51AG*	Periscope Sextants	X	X		X		X	X	X
51B**	AHRS	X	X	X	X	X	X	X	X
51B**	C9D	X	X	X	X	X	X	X	X
51C**	Multiple Station Display	X	X	X	X	X	X	X	X
51H**	Ground Proximity Warning	X	X	X	X	X	X	X	X
52A**	Autopilot Yaw Damper	X		X10	X10	X10	X10	X10	X10
62***	VHF Communication	X	X11	X11	X11	X11	X11	X11	X11
63***	UHF Communication	X	X12	X12	X12	X12	X12	X12	X12
64***	Interphone	X	X	X	X	X	X	X	X
65***	IFF (Including Mode C)	X	X	X	X	X	X	X	X
71AA*	LORAN	X							
71AB*	VOR/Instrument Landing System	X	X	X	X	X	X	X	X

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)						
			ITQ	LOL	OWM	NTB	NTA	CEL	MAN
72AB*	Radar	X	X	X	X	X	X	X	X
72BH*	Combined Altitude Radar Altimeter	X							X
73A**	Navigation Computer System	X	X	X	X	X	X	X	X
73B**	INS	X	X	X	X	X	X	X	X
91***	Emergency Equipment	X	X	X	X	X	X	X	X
97***	Explosive Squib	X	X	X	X	X	X	X	X

Legend:

CEL Celestial Navigation Mission (day and night)
ITQ Instructor Training School Initial Qualification
LOL Low Level
MAN Marine Aerial Navigation School
NTA Navigation Training, Advanced
NTB Navigation Training, Basic
OWM Overwater Mission

NOTES:

1. Antiskid may be inoperative if operations are conducted in compliance with T.O. 1T-43A-1.
2. Automatic spoiler control may be deactivated if operations are in compliance with T.O. 1T-43A-1.
3. One tachometer may be inoperative if the other tachometer and fuel flow indicator for the affected engine are operating normally.
4. Only required if mission is dependent on its use; for example, operations from a location that cannot provide an external power source.
5. One air-conditioning (A/C) pack may be inoperative on flights below 25,000 feet MSL. For any operating A/C pack, the cabin temperature manual or automatic control must be operative. Both A/C packs may be inoperative for unpressurized flight provided the outflow valve is open. Wing anti-ice valve may be inoperative if the valve is manually closed and the electrical power connector is disconnected.
6. The cabin altimeter or cabin differential pressure indicator must be operative. If either are inoperative, a chart must be provided to convert cabin differential pressure to cabin altitude or convert

cabin altitude to cabin differential pressure (not required for unpressurized flight). Cabin pressure control standby and manual modes required on all flights if the respective package is operating.

7. One generator or constant speed drive may be inoperative provided the auxiliary power unit and its generator are operating and supplying power to the electrical system.
8. Must meet AFI 11-202, Volume 3, *General Flight Rules*, and AETC Supplement 1 requirements.
9. One wing boost pump is inoperative in each tank if a minimum of 4,800 pounds of fuel is maintained in the affected tank.
10. PMC when inoperative. Restrict use of aileron axis to 30,000 feet or below.
11. May be inoperative if the UHF communication system is operational.
12. May be inoperative if the VHF communication system is operational.

Attachment 23 (Added-AETC)

F-15A/B/C/D MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below) (note 1)	
WUC	**System/Subsystem**		**ASY**	**ADC**
11***	Airframe	X	X	X
12***	Cockpit and Fuselage Compartments	X	X	X
13***	Landing Gear	X	X	X
14***	Flight Controls	X	X	X
23***	Turbofan Powerplant	X	X	X
24***	Secondary Powerplant	X	X	X
41***	Air Conditioning, Pressurization, and Anti-Ice Control System	X	X2	X2
42***	Electrical Power Supply	X	X	X
44A**	Exterior Lighting System	X3	X4	X4
44B**	Interior Lighting System	X	X	X
45***	Hydraulic System	X	X	X
46***	Fuel System	X	X	X
47***	Oxygen System	X	X	X
49***	Miscellaneous Utilities	X	X	X
51***	Instruments	X	X1	X1
52***	Autopilot	X		
52A**	Control Augmentation System	X	X	X
55***	Malfunction Analysis and Recording	X		
55AE*	Built-In Test Display Group	X	X	X
57***	Integrated Guidance and Flight Control System	X	X	X
63A**	UHF Communications Set	X5	X5	X5
63B**	Integrated CNI Control	X	X	X
63C**	Intercommunication	X6		
65***	IFF	X	X	X
71A**	Inertial Navigation Set, AN/ASN-109	X	X	X
71B**	Directional Finder Group	X		
71C**	Instrument Landing Set	X	X7	X7
71F**	Attitude Heading Reference Set	X	X	X
71M**	Inertial Navigation/Ring Laser Gyro	X	X	X
71Z**	Tactical Air Navigation	X	X7	X7
74***	Fire Control System	X	X	X
74L**	Video Tape Recorder System	X		
75***	Weapons Delivery	X	X8	X8
75H	Gun System	X	X9	X9

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below) (note 1)	
			ASY	ADC
76***	Electronic Countermeasures	X	X	X
76B**	ALR-56	X	X	X
76G**	Electronic Warfare Warning Set, ALQ-128	X	X	X
76K**	Countermeasures Dispenser	X	X10	X10
91***	Emergency Equipment	X	X	X
97***	Explosive Devices and Components	X	X	X

Legend:

ADC Air Defense, Conventional

ASY Air Superiority

NOTES:

1. Redundant rear cockpit systems, subsystems, and components that do not affect safety of flight or front seat operation are not required to be operatonal for BSLs. Report as PMC.
2. Manual mode only required.
3. As required by AFI 11-202, Volume 3, *General Flight Rules,* and AETC Supplement 1.
4. Strip lighting and landing lights required as a minimum.
5. Have Quick/Secure Voice required if aircraft is equipped.
6. Applies to B and D models only.
7. Either instrument landing system or TACAN must be operational.
8. All eight weapons stations required for FMC. Any combination of six required for PMC.
9. Training missions not requiring firing of the gun on aircraft with gun system deficiencies that do not restrict flight operations report as PMC.
10. All eight Countermeasures Dispensers required for FMC. One of the CMD system required for PMC.

Attachment 24 (Added-AETC)

F-16A/B/C/D MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)			
WUC	**System/Subsystem**		**ADC**	**ASC**	**ASY**	**ASN**
11***	Airframe	X	X	X	X	X
12***	Crew Station System	X	X	X	X	X
13***	Landing Gear System	X	X	X	X	X
14***	Flight Control System	X	X1	X1	X1	X
23***	Turbofan Power Plant (PW engines)	X	X	X	X	X
24***	Auxiliary Power Plant/Jet Fuel Starter	X	X	X	X	X
27***	Turbofan Power Plant (GE 110)	X	X	X	X	X
41***	Environmental Control System	X2	X2	X2	X2	X2
42***	Electrical Power Supply	X	X3	X3	X3	X3
44A**	Exterior Lighting	X4	X5	X5	X5	X5
44B/C	Interior Lighting	X	X	X	X	X
45***	Hydraulic & Pneumatic System	X	X	X	X	X
46***	Fuel System	X	X	X	X	X
47***	Oxygen System	X	X6	X6	X6	X6
49A**	Fire Detection System	X	X	X	X	X
49B**	Overheat Detection System	X	X	X	X	X
51***	Flight Instruments	X	X7	X7	X7	X7
61***	HF Communications	X	X			
62***	VHF Communications	X8	X8	X8	X8	X8
63***	UHF Communications	X8	X8	X8	X8	X8
64***	Interphone	X	X9	X9	X9	X9
65***	IFF	X	X	X	X	X
71***	Radio Navigation	X	X	X	X	X
71D**	Global Positioning System	X	X	X10	X	X
74***	Fire Control System	X	X	X	X	X
74G**	Airborne Video System	X11				
74H**	Data Transfer Unit	X	X12	X	X	X
74L**	Radar Altimeter System	X		X10		X10
74N**	Targeting Pod (GTP) System	X13		X13		X13
74P**	Navigation Pod (VP) System	X13		X13		X13
75***	Weapons Delivery System	X	X14	X14	X14	X14
75A**	Gun System	X	X15	X15	X15	
76***	Electronic Counter Measures	X	X	X	X	X
76B/C	Radar Warning Receiver	X	X	X	X	X
76Y	Chaff/Flare Dispensing System	X	X	X	X	X

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)			
			ADC	ASC	ASY	ASN
91***	Emergency Equipment	X	X	X	X	X
97***	Explosive Devices and Components	X	X	X	X	X

Legend:

ADC Air Defense, Conventional
ASC Air to Surface, Conventional
ASN Air to Surface, Nuclear
ASY Air Superiority

NOTES:

1. Excludes indicator override, leading edge flap indicator, and speed bake indicator.
2. Manual mode only required.
3. Excludes external power system.
4. As required by AFI 11-202, Volume 3, *General Flight Rules*, and AETC Supplement 1.
5. Minimum navigation/formation light requirements for PMC include one anti-collision, one position light per wing, both inlet lights, and tail navigation light. Landing and taxi lights required as a minimum for PMC.
6. Excludes quantity check switch.
7. Excludes secondary instruments and rear cockpit accelerometer.
8. Have Quick/Secure Voice required if aircraft is equipped.
9. Applies to B and D models only if rear cockpit is occupied.
10. Required for aircraft performing the LANTIRN mission only.
11. If equipped.
12. Excludes Air National Guard ADF aircraft.
13. Aircraft systems must be capable of LANTIRN operation to be FMC regardless of pod operation.
14. For air-to-air, all four outboard stations (1, 2, 8, and 9) are required for FMC. Three of four outboard stations (1, 2, 8, and 9) of which at least two are LAU-129 capable are required for PMC. For air-to-surface, all four inboard stations (3, 4, 6, and 7) are required for FMC and PMC.
15. Training missions not requiring firing of the gun on aircraft with gun system deficiencies that do not restrict flight operations report as PMC.

Attachment 25 (Added-AETC)

C-5A MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)				
WUC	**System/Subsystem**		**ARC**	**ALP**	**ARD**	**ALR**	**SO**
11A**	Windshield, Windows	X	X	X	X	X	X
11B**	Visor Door, Ramp and Loading System	X	X1		X1		X1
11F**	Aft Cargo Doors and Loading Ramp System	X		X2	X2	X2	
11H**	Aft Pressure Door System	X	X	X	X	X	X
11L**	Crew Doors, Emergency Doors (7R/L)	X	X	X	X	X	X
11N**	Service and Troop Doors	X	X3	X3	X3	X3	X3
11QAM	Access Door, Environmental Compartment	X	X	X	X	X	X
11QAR	Door Assembly, Flight Station Stairway	X					
11QAV	Door Assembly, Negative Pressure Relief	X	X	X	X	X	X
11Q**	Group V and VI, External Access Doors	X	X	X	X	X	X
11R**	Emergency Hatch Assembly (1, 2, 3L/R, 4)	X	X	X	X	X	X
11RK*	Hatch, Fwd/Aft Bilge Access and Comp	X	X	X	X	X	X
11S**	Structural Assembly; Fuselage, Wing, Empennage	X	X	X	X	X	X
11V**	Skin Grid Components	X	X	X	X	X	X
12AA*	Seat Assemblies, Pilot/Copilot/ Engineer						
12AB*	Seat Assembly, Observer	X	X	X	X	X	X
12AB*	Shoulder Harness/Take up Reel	X					
12CAG	Aircraft Cargo Winch	X	X		X		
12CA*	Guide/Restraint Rails/Mechanisms	X		X4		X4	X4
13A**	Landing Gear Assembly and Doors	X	X5	X5	X5	X5	X5
13H**	Kneeling System, Landing Gear	X	X		X		X
14***	Flight Controls	X	X	X	X	X	X
23A**	Powerplant, Turbofan, TF-39	X	X	X	X	X	X
23XA*	Engines, Instruments, EPR (Group 1 and 2)	X6	X6	X6	X6	X6	X6

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)				
			ARC	ALP	ARD	ALR	SO
23XD*	Engines, Instruments, Inlet Temperature, RPM, Fuel Flow	X7	X7	X7	X7	X7	X7
23XK*	Engines, Instruments, Oil Pressure, Oil Temperature	X	X	X	X	X	X
23Z**	Thrust Reverser System	X8					
24A**	Auxiliary Powerplant	X9	X9	X9	X9	X9	X9
41A**	Air-Conditioning, Pressurization, and Windshield Wiper System	X10	X10	X10	X10	X10	X10
42A**	DC Power Supply	X11	X11	X11	X11	X11	X11
42E**	AC Power Supply	X	X12	X12	X12	X12	X12
42G**	Emergency AC/DC Power Supply	X	X	X	X	X	X
42J**	Auxiliary AC Power System	X	X13	X13	X13	X13	X13
42L**	Electric Indicators, Transformers, Buses	X	X	X	X	X	X
44A**	External Lights	X14			X15	X15	X15
44CR*	Master Caution System	X					
45A**	Hydraulic Power System	X	X16	X16	X16	X16	X16
45J**	Hydraulic Power Transfer System	X	X	X	X	X	X
45L**	Hydraulic System, No. 1 and 4 ATM	X	X17	X17	X17	X17	X17
45P**	Hydraulic System, Instruments	X	X	X	X	X	X
46***	Fuel System	X	X18	X18	X18	X18	X18
46***	Fuel Quantity/Indicating System	X	X19	X19	X19	X19	X19
46J**	Aerial Refueling System	X			X	X	X15
46L**	Fuel Management System	X	X	X	X	X	X
47***	Oxygen System	X	X	X	X	X	X
49A**	Fire Protection/Suppression System	X	X20	X20	X20	X20	X20
51A**	Flight Instruments	X	X21	X21	X21	X21	X21
52A**	Autopilot	X					
52E**	Go-Around Attitude System	X					
52J**	Flight Augmentation Subsystem	X	X22	X22	X22	X22	X22
52N**	Limiter System	X					
52A**	MADAR/MADAR II System	X					
61***	HF/UHF/VHF Communications	X	X10	X10	X10	X10	X10
64***	Interphone	X	X	X	X	X	X
65***	IFF	X	X	X	X	X	X
66A**	Crash Data Position Indicator Recorder	X	X23	X23	X23	X23	X23
66B**	Emergency Radio, Recorders, Beacons	X					
71B**	TACAN	X	X21	X21	X21	X21	X21
71G**	Glideslope System	X	X21	X21	X21	X21	X21
71J**	VHF Navigation	X	X21	X21	X21	X21	X21
72A**	Weather Radar, AFS133	X	X24	X24	X	X	X

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)				
			ARC	ALP	ARD	ALR	SO
72G**	Radar Altimeter	X24					
72H**	Triple INS	X	X25	X25	X25	X25	X25
91A**	Emergency Equipment	X					
91B**	Emergency Equipment	X	X	X	X	X	X
97A**	Fire Extinguisher System	X	X	X	X	X	X

Legend:

ARC Airland, Rolling Cargo
ARD Airland, Rolling Cargo, Air Refueling
ALP Airland, Palletized Cargo
ALR Airland, Palletized Cargo, Air Refueling
SO Special Operations

NOTES:

1. Visor may be inoperative, but must be closed and locked. Aft loading system must be operational.
2. Aft loading system may be inoperative, but must be closed and locked. Forward loading system and landing gear kneeling system must be operable.
3. Troop compartment service door must be closed and locked.
4. Portions may be inoperative. Palletized cargo carrying capability will be restricted in the affected area.
5. Aircraft brakes may be inoperative as follows:
   5.1. Any one pair of brakes inoperative (22 brakes operative).
   5.2. Any one pair of brakes inoperative on each side of airplane (20 brakes operative).
6. Pilots and flight engineers engine pressure ratio indicators may be inoperative if the N1 is operative.
7. One operable indicator for each engine (pilots or flight engineer position).
8. Inboard thrust reversers are required for emergency descents.
9. One fully operational system required.
10. One air-conditioning pack required. Cabin pressurization must have one system (auto or manual) operable. Equipment cooling system must have one cooling fan operable.
11. One serviceable battery required.

12. Three generators required and bus tie system will be operable for an inoperative generator.
13. One auxiliary power unit generator system required.
14. Landing light required if taxi light is inoperative. Taxi light required if landing light is inoperative.
15. Air refueling slipway light required for in-flight refueling.
16. Engine-driven hydraulic pumps may have one pump on two adjacent engines inoperative if all power transfer units are operable and all pumps have positive depress capability. Hydraulic suction pumps may be inoperative if the electric suction boost pumps are operative. Electric suction boost pumps may be inoperative if the hydraulic suction pumps are operative.
17. An air turbine motor (#1 or #4) may be inoperative if the other is operable.
18. One auxiliary or one extended range (ER) tank on either wing may be inoperative. One pump per inboard auxiliary tank or one pump per ER tank may be inoperative. Center separation valve may be inoperative if the left and right air refuel valves are operational. Right/left separation valve must have appropriate crossfeed valves operable. One ground pressurized refuel system must be operational.
19. Main tank indicators are required. One auxiliary or ER tank indicator per wing may be inoperative if the symmetrically opposite indicator in the other wing is operative. All indicators required for aerial refueling.
20. Nitrogen inerting system must have a minimum of one climb and dive valve per wing operable.
21. Pilots position mach/airspeed, ADA, altimeter, vertical velocity indicators are required. Navigation instruments require one operational system and include TACAN, glideslope system, and VHF navigation.
22. Only yaw augmentation is required.
23. Only one emergency beacon transmitter is required.
24. Radar beacon mode may be inoperative. Radar altimeter requires one system to be operable.
25. One INS may be inoperative for navigation provided the attitude function and navigation selection panels are operative. Fully operational INS units will be in the number 1 and number 3 positions.

Attachment 26 (Added-AETC)

C-17 MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)			
SSSN	**System/Subsystem**		**ALA**	**ALE**	**ALT**	**AR**
2100	**AIR-CONDITIONING:**					
2120	Distribution	X1	X1	X1	X1	X1
2130	Pressurization Control	X2	X2	X2	X2	X2
2140	Heating (Cargo and Ramp Floor)	X	X	X	X	X
2150	Cooling	X	X3	X	X3	X3
2160	Temperature	X4	X4	X4	X4	X4
2190	System Control	X	X	X	X	X
2200	**AUTO FLIGHT:**					
2210	Electronic Flight Control System	X5	X5	X5	X5	X5
2218	Ground Proximity Warning System	X6	X6	X6	X6	X6
2230	Auto Throttle					
2300	**COMMUNICATIONS:**					
2310	Speech Communications	X7	X7	X7	X7	X7
2320	Data Transmission/Auto Calling	X	X	X	X	X
2330	Passenger Address	X8	X8	X8	X8	X8
2340	Intercommunications	X9	X9	X9	X9	X9
2350	Audio Integrating	X	X	X	X	X
2360	Static Discharging					
2370	Audio Monitoring	X	X	X	X	X
2380	Integrated Automatic Tuning	X	X	X	X	X
2400	**ELECTRICAL POWER:**					
2420	Alternating Current Generation	X10	X10	X10/11	X10	X10
2430	Direct Current Generation	X12	X12	X12	X12	X12
2440	External Power	X13		X13		
2450	Electrical Load Distribution	X14	X14	X14	X14	X14
2460	Emergency Generation	X	X	X	X	X
2470	Electrical Monitoring and Protection	X	X	X	X	X
2500	**EQUIPMENT AND FURNISHINGS:**					
2530	Buffet and Galley					
2540	Lavatories	X15	X15	X15	X15	X15
2560	Emergency	X	X	X	X	X
2580	Armor Protection					
2600	**FIRE PROTECTION:**					
2610	Detection	X16	X16	X16	X16	X16
2620	Extinguishing	X	X	X	X	X

SSSN	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)			
			ALA	ALE	ALT	AR
2700	**FLIGHT CONTROLS:**					
2710	Aileron	X17	X17	X17	X17	X17
2720	Rudder	X18	X18	X18	X18	X18
2730	Elevator	X19	X19	X19	X20	X19
2740	Horizontal Stabilizer	X21	X21	X21	X21	X21
2750	Flaps	X22	X22	X22	X22/23	X22
2760	Spoilers	X24	X24	X24	X24/25	X24
2780	Slats	X26	X26	X26	X26	X26
2800	**FUEL:**					
2810	Storage	X27	X27	X27	X27	X27
2820	Distribution	X28	X28	X28	X28	X28
2830	Dump	X29	X29	X29	X29	X29
2840	Indicating	X30	X30	X30	X30	X30
2850	UARRSI	X31				X31
2900	**HYDRAULIC POWER:**					
2910	Main	X32	X32	X32	X32	X32
2920	Auxiliary	X33	X33	X33	X33	X33
2930	Indicating	X34	X34	X34	X34	X34
3000	**ICE AND RAIN PROTECTION:**					
3010	Airfoil	X				
3020	Air Intakes	X				
3030	Air Data Sensor Heat Cont/Monitor	X	X35	X35	X35	X35
3040	Windows and Windshields	X	X	X	X	X
3080	Detection	X				
3100	**INDICATING AND RECORDING SYSTEMS:**					
3130	Recorders	X36				
3140	Central Computers	X37	X37	X37	X37	X37
3150	Central Warning Systems	X	X	X	X	X
3160	Central Display Systems	X38	X38	X38	X38	X38
3200	**LANDING GEAR:**					
3210	Main Gear	X	X	X	X	X
3220	Nose Gear	X	X	X	X	X
3230	Extension and Retraction	X	X	X	X	X
3240	Wheels and Brakes	X	X39	X39	X39	X39
3246	Brake Temperature	X	X40	X40	X40	X40
3250	Steering	X	X41	X41	X41	X41
3260	Position and Warning	X	X	X	X	X
3300	**LIGHTS:**					
3310	Flight Compartment	X				
3320	Crew Rest Area	X				

SSSN	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)			
			ALA	ALE	ALT	AR
3330	Cargo and Service Compartments	X42	X42	X42	X42/43	X42
3340	Exterior	X44	X44	X44	X44	X44
3350	Emergency Lighting	X	X	X	X	X
3360	Refuel Lighting	X		X		X
3400	**NAVIGATION:**					
3410	Flight Environment Data	X45	X45	X45	X45	X45
3420	Attitude and Direction	X46	X47	X47	X48	X46
3441	Weather Radar	X	X49	X49	X49	X49
3442	Radar Altimeter	X50	X50	X50	X50	X50
3443	Inertial Reference	X	X51	X51	X51	X51
3446	Station Keeping Equipment	X52	X52	X52	X52	
3450	Dependent Position Determing	X53,54	X54	X54	X54	X53,54
3453	TACAN	X				X55
3457	Global Positioning System	X			X	
3460	Position Computing (MSN Comp)	X56	X56	X56	X56	X56
3500	**OXYGEN:**					
3510	Crew	X57	X57	X57	X57	X57
3520	Passenger and Auxiliary	X58	X58	X58	X58	X58
3530	Portable	X59	X59	X59	X59	X59
3600	**PNEUMATIC:**					
3610	Distribution	X60	X60	X60	X60	X60
3620	Indicating	X61	X61	X61	X61	X61
3800	**WATER AND WASTE:**					
3810	Potable Water					
3830	Waste Disposal					
3840	Air Supply					
4100	**CARGO HANDLING AND MSN SYSTEMS:**					
4130	Aerial Delivery-Cargo	X			X	
4140	Aerial Delivery-Personnel	X			X	
4160	Aeromed System	X		X		
4170	Seats	X	X	X	X	X
4700	**OBIGGS:**	X62				
4710	Generation and Storage	X63	X63	X63	X63	
4720	Distribution and Control	X				
4740	Indication	X				
4900	**AUXILIARY POWER UNIT:**					
4910	Power Plant	X64				
5200	**DOORS:**					
5211	Crew Entrance	X	X	X	X	X
5220	Emergency Exit	X	X	X	X	X

SSSN	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)			
			ALA	ALE	ALT	AR
5230	Cargo/Ramp	X	X	X	X65	X
5240	Service	X	X	X	X	X
5270	Door Warning	X66	X66	X66	X66	X66
5280	Landing Gear	X	X	X	X	X
5600	**WINDOWS:**					
5610	Windshields	X	X	X	X	X
7200	**ENGINE:**					
7200	Engine Assembly	X	X	X	X	X
7300	**ENGINE FUEL:**					
7310	Distribution	X	X	X	X	X
7320	Controlling	X67	X67	X67	X67	X67
7330	Indicating	X	X	X	X	X
7400	**ENGINE IGNITION:**					
7410	Electrical Power Supply	X68	X68	X68	X68	X68
7500	**ENGINE AIR:**					
7520	Distribution (Comp/Turbine Cooling)	X	X	X	X	X
7530	Variable Stator Vanes	X	X	X	X	X
7600	**ENGINE CONTROLS:**					
7610	Power Control	X69	X69	X69	X69	X69
7620	Emergency Shutdown	X	X	X	X	X
7700	**ENGINE INDICATING:**					
7710	Power	X	X	X	X	X
7720	Temperature	X	X	X	X	X
7740	Integrated Engine Instrument System	X	X	X	X	X
7800	**ENGINE EXHAUST:**					
7830	Thrust Reversers	X	X70	X70	X70	X70
7900	**ENGINE OIL:**					
7910	Storage	X	X	X	X	X
7920	Distribution	X	X	X	X	X
7930	Indicating	X71	X71	X71	X71	X71
8000	**ENGINE STARTING:**					
8010	Starting	X72	X72	X72	X72	X72
9300	**TACTICAL ELECTRONIC WARFARE:**	X73				
9310	Missile Warning and Sensing System	X				
9500	**CREW ESCAPE AND SAFETY:**					
9520	Escape Hatches	X74	X74	X74	X74	X74
9523	Flotation Equipment Deployment (FED)	X74	X74	X74	X74	X74
9530	Ramp Escape	X74		X74		

Legend:

ALA Airlift, Airland
ALE Airlift, Evacuation
ALT Airlift, Tactical
AR Air Refueling

NOTES:

1. Cargo Compartment recirculation fan (2122BB001) required if one refrigeration unit is inoperative. Two of three avionics cooling fans (2126BB001-003) must be operational. Two of three positive pressure relief valves (2134FV001-003) must be operational. Two of three negative pressure relief valves (2134FV004-006) must be operational.
2. One complete pressurization system (2131) must be operational. Two of three indicators in cabin pressure indicator unit (2133PL001,600,601) must be operational.
3. One of two refrigeration units (2153AA001,002) must be operational. No ram air ventilation valves (2155FV001,002) required if both refrigeration units are operational. One or two ram air inlet doors (2155AA005,006) may be inoperative if secured open.
4. Remote temp control switch (2167SW) may be inoperative if the loadmaster's temp control is operational.
5. Three of four flight control computers (2211CM001-004) must be operational. **(Positions 1 and 4 must have operational flight control computers installed.)** Flyable exceptions to preflight BIT failures are contained in T.O. 1C-174-2-22F1-00.
6. One of two stick shakers (2118BB) must be operational. Ground proximity warning system (2218) required for low-level flight.
7. UHF backup radio control set (2313CT) required if one CNC or CCU is inoperative. One of two VHF receiver-transmitters (2312TS) must be operational. One of two UHF receiver-transmitters (2313TS001,002) must be operational. **(ARC-187 required**)
8. One of three public address control sets (2331CT) must be operational. No three adjacent public address speakers (2331LS) may be inoperative.
9. Pilot, copilot, forward loadmaster, and aft loadmaster's intercom control sets of seven total (2341CT) must be operational.
10. Three of four AC generator systems (2421) must be operational.
11. 60hz power supply system (2426) must be operational. **(ALE only)**
12. Three of four transformer rectifiers (2431PS001-004) must be operational.
13. Required if APU is inoperative.
14. One of two instrument power transformers (2451TF001-002) must be operational. **(Operative transformer must be installed on bus 3.)**

15. Suitable latrine facilities for all crewmembers must be provided.
16. One of two fire loops per engine (A or B) (2611) must be operational. Six of 14 cargo compartment smoke detectors (2613AS001-014) must be operational in locations 9, 10, 13, and 14 plus two other locations. One of two avionics smoke detectors (2617AS001-002) must be operational. One of two avionics smoke detectors (2617AS003-004) must be operational. One of two avionics smoke detectors (2617AS005-006) must be operational.
17. One of two actuators (2713HP001-004) per surface must be operational.
18. Upper rudder IFCM (2723FV001) may be inoperative. One rudder actuator (2723HP001-004) per surface may be inoperative. **(All rudder IFCM and rudder actuators must be operational for SAAF operations.)**
19. One of four elevator IFCMs (2733FV001-004) may be inoperative if surface is in neutral or float position. Two of eight elevator actuators (2733HP001-004) may be inoperative.
20. One of four elevator IFCMs (2733FV001-004) maybe inoperative if surface is in neutral or float position. Two of eight elevator actuators (2733HP001-008) may be inoperative (but cannot be failed in the same surface)--applies to SAAF operations only.
21. One of two horizontal stab trim control valves (2743FV001) may be inoperative if opposite trim motor is operational. One of two horizontal stab pitch trim motors (hydraulic) (2744AA001A,001B) may be inoperative if opposite control valve is operational. Pitch trim indicator (2745MN001) may be inoperative if MFD indicator is operative.
22. One of eight flap actuators (2752HP001-008) may be inoperative. One channel per module for each of four flap tandem control valves (2752FV0001-004) may be inoperative. Flap position indicator (2753MN001) may be inoperative if MFD indication is operative. **3/4 flap restrictions apply.**
23. All eight flap actuators (2752HP001-008) must be operational for SAAF operations. All four flap tandem control valves (2752FV0001-004) must be operational for SAAF operations.
24. One of four spoiler panel actuators per wing (2764HP001-009) may be inoperative. Speed brake indicator (2765MN001) may be inoperative if MFD indicator is operative.
25. All four spoiler panel actuators per wing (2764HP001-009) must be operational for SAAF operations.
26. One of eight slat actuators per wing (2782HP001-016) may be inoperative.
27. Center separation valve (2813FV001) may be inoperative if both air refuel isolation valves are operational. One element (primary, secondary, override solenoid) of the climb and dive valve system (2812FV) may be inoperative per wing.
28. One of two ground refuel receptacles (2821AA001,002) may be inoperative. One boost pump per wing may be inoperative if inboard transfer pumps and crossfeed valves are operational.
29. One of two fuel jettison isolation valves (2831FV001,002) and the center separation valve must be operational.
30. Of 48 fuel tank quantity probes (2841AS005-052), 1 per tank may be inoperative. One of two channels (A or B) of fuel quantity computer (2841CM001) must be operational. One of four fuel quantity display units (2841DD002-005) may be inoperative if total fuel quantity indicator is

operational. One of four fuel boost pump low pressure switches per wing (284SW) may be inoperative if inboard transfer pumps and crossfeed valves are operational.

31. One of two air refuel isolation valves (2851FV001-002) may be inoperative if center separation valve is operational.
32. Six of eight engine driven hydraulic pumps (2911FP001-008) must be operational. **(Only one pump per system may be inoperative, only one pump can be inoperative between system 2 and 3, and AC motor pump for affected system and power transfer pump must be operational.)**
33. Reversible hydraulic motor pump (2922FP001) may be inoperative if #2 and #3 system engine-driven hydraulic pumps and or auxiliary pumps are operational.
34. One of four hydraulic manifold pressure transducers (2931AS001-004) may be inoperative if associated pump low pressure light and temperature indicators are operational. Four of four hydraulic reservoir liquid quantity transducers (2932AS001-004) may be inoperative if associated system low quantity proximity sensor is operational. Four of four hydraulic reservoir low quantity proximity sensors (2932SW001-004) may be inoperative if associated system reservoir liquid quantity transducer is operational.
35. Air data sensor heat control/monitoring system must be operational for all missions scheduled to transit RVSM airspace.
36. ELT, CVR, and SFDR should be operational for all home station departures.
37. One of two propulsion data management computers (3141CM001-002) may be inoperative.
38. One of four multifunction displays (3161AA001-004) may be inoperative if one heads-up display is operational. Two of four multifunction displays (3161AA001-004) may be inoperative if two heads-up displays are operational. For formation flight, four multifunction displays (3161AA001-004) plus one heads-up display or three multifunction displays plus two heads-up displays must be operational. One of two multifunction control panels (3161CT001-002) may be inoperative.
39. One of 12 main landing gear multidisk brakes (3243MB001-012) may be inoperative.
40. One brake temperature indicator sensor per bogie may be inoperative. **(See SSSN 3240, Note 39, for operational brake requirements.)**
41. One of two nose landing gear steering cylinder assemblies (3251HP001-002) may be inoperative. **Both must be operational for SAAF operations.**
42. Sixteen white incandescent cargo compartment lights required for cold weather operations.
43. Sixteen red incandescent cargo compartment lights required for tactical missions.
44. One wingtip (3341AA001-002) or fuselage (3342DS001-002) landing and taxi light on each side must be operational. One of two nose taxi and landing lights (3342AA001-002) may be inoperative if the wingtip landing and taxi light on the same side are operational. One of two fuselage landing and taxi lights (3342DS001-002) may be inoperative if the nose taxi and landing light on the same side are operational. One of two anticollision beacon lights (3345AA001-002) may be inoperative.

45. One of four pitot-static probes (3411AS001-004) may be inoperative. **Upper left and lower right probes must be operational.** Either pilot or copilot must have a full set of standby indicators. One channel (A or B) in one of two air data computers (3416CM001-002) may be inoperative.
46. One of two bearing distance heading indicators (3421MM001,002) may be inoperative. Zero of two head-up displays (3425AA001,002) required if four multifunction displays are operational.
47. One of two bearing distance heading indicators (3421MM001,002) may be inoperative. Zero of two head-up displays (3425AA001,002) required.
48. One of two bearing distance heading indicators (3421MM001,002) may be inoperative. One of two head-up displays (3425AA001,002) required for low-level flight or SAAF landings.
49. Weather radar required if flying into known or forecasted storms.
50. One of two radar altimeters (3442) may be inoperative.
51. One of four inertial reference units (3443AA001-004) may be inoperative.
52. Required for formation flying training.
53. TACAN receiver transmitter (3453TS001) required for air refuel missions only.
54. Identification friend or foe (IFF) must be operational for all missions scheduled to transit reduced verticle separation minimum (RVSM) airspace.
55. If TACAN is inoperative, radar beacon must be operational.
56. Two of four mission computer display units (3462AA001-004) may be inoperative. One of three mission computers (3462CM001-003) may be inoperative.
57. Twenty-five liter crew LOX converter (3511FR001) may be inoperative if auxiliary system and crossfeed are operational. Seven of 10 oxygen diluter demand regulators (3512FW001-009,011) may be inoperative if operational units are installed in the 3 primary crew positions. Five of eight folding oxygen mask assemblies (3513MP003-010) may be inoperative if operational units are installed in the three primary crew positions.
58. Seventy-five liter passenger LOX converter (3521FR001) may be inoperative if auxiliary system is operational. Seventy-five liter auxiliary LOX converter (3521FR003) may be inoperative if passenger system is operational.
59. Three of six portable oxygen quick-don masks (3531MP004-012,016,020,024) may be inoperative. Six of nine portable oxygen cylinder and regulators (3531AA001-009) may be inoperative. **(One must be operational for each crewmember.)**
60. One engine bleed air supply system (3611) per wing may be inoperative. **(Restricted from flight into known icing conditions.)** Center wing isolation valve (3615FV001) may be inoperative if valve can be manually closed after engine start. **(Two bleed air sources will be required for each operational AC refrigeration unit.)**
61. One of two manifold failure detector channels (A or B) (3623) may be inoperative. Two of four wing ice protection burst duct differential pressure switches (3623SW001-004) may be inoperative. **(One per wing must be operational.)** Four of eight cowl ice protection burst duct differential pressure switches (3623SW005-012) may be inoperative. **(One per engine must be operational.)**

62. System deactivated for training.
63. OBIGGS required for combat operation only (FSL). Minimum of one half of the OBIGGS must be operational for combat operations (ALA, ALE, ALT).
64. Required if external power is inoperative.
65. All cargo door and ramp ditching locks must be operational (electrical mode) for airdrop missions.
66. The following proximity indicating systems may be inoperative if the door is visually verified closed and locked: crew door (5271AS001); cargo door (5272AS001); emergency exit (5273AS001); horizontal stabilizer access door (5274AS006); ramp (5275AS001); crew oxygen door (5274AS001); belly maintenance hatch (5274AS004); and vertical stabilizer access hatch (5274AS005).
67. Four of four electronic engine controls must be operational. Each has two channels (A and B); **one channel on each must be operative, engine will operate in N1 mode.**
68. Channel B of each engine ignition system (7411) may be inoperative. **(Channel A must be operational.)**
69. Throttle friction adjustment clutch (7611AA006) may be inoperative. **(Must be failed with clutch disengaged.)**
70. Four of four engine core or fan thrust reversers (7830) may be inoperative. **(Inoperative thrust reversers must be locked out in symmetrical pairs.) All thrust reversers must be operational for SAAF operations.**
71. Four of four oil quantity transmitters (7931AS001-004) may be inoperative. **(Oil pressure indication and temp indication must be operational.)** Four of four oil pressure switches (7934SW001-004) may be inoperative. **(Oil pressure indication must be operative.)**
72. Four of four starter control valves (8011FV001-004) may be inoperative. **(Start valves must be operated manually.)**
73. System deactivated for training.
74. See **Table A26.1.**

Table A26.1. (AETC) Crew Escape and Safety Emergency Equipment.

ITEM	A Emergency Equipment	B Installed	C Required Home Station Launch	D Training Missions	E En Route (Major)	F En Route Without C-17 MX
1	FEDS Hatches	4	4	2 (note 1)	2 (note 1)	2 (note 1)
2	FEDS Liferafts (includes Retractor Assembly and Ladders)	3	3 (note 2)	0 (note 3)	2 (note 3)	2 (note 3)
3	FEDS Initiators	7	7	6 (note 4)	6 (note 4)	6 (note 4)
4	Fire Extinguishers	9	9	9	9	8
5	Crash Axes	2	2	2	2	2
6	Ramp Blow Down System	1	1	0 (note 5)	0 (note 5)	0 (note 5)

NOTES:

1. Four operational hatches required for any flight that exceeds power off gliding distance from land.
2. Liferafts must be installed.
3. Raft quantity adequate to accommodate total persons on board (46 per raft) when flight exceeds power off gliding distance from land.
4. All required for flights exceeding power off gliding distance from land. Exterior initiator is required at all times.
5. Required for aeromed evacuation.

Attachment 27 (Added-AETC)

KC-135R MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)		
WUC	**System/Subsystem**		**CFI**	**CCT**	**ALR**
11***	Airframe	X	X	X	X
12***	Fuselage Compartments	X			X1
13***	Landing Gear	X	X	X	X
14***	Flight Controls	X	X	X	X
24B/C/D	Auxiliary Power Unit (Turbo Mach)	X			X2
27***	Engines	X	X	X	X
41***	Environmental Control	X	X3	X3	X3
42***	Electrical Power	X	X	X	X
441**	Interior Lighting	X	X4	X4	X4
442**	Exterior Lighting	X	X	X	X
45***	Hydraulic/Pneudraulic Power Supply	X	X	X	X
46***	Fuel Systems	X	X	X	X
467**	Air Refueling Off-Load	X	X4	X4	X
47***	Oxygen System	X	X5	X5	X
49***	Miscellaneous Utilities	X	X5	X5	X5
51A**	Flight Director	X	X	X	X
51B**	Rotation Go-Around System	X	X	X	X
51D**	Central Air Data System	X	X	X	X
51E**	Fuel Saving Advisory/Cockpit Advisory System	X	X4/6	X4/6	X
511**	Flight Instruments	X	X	X	X
5121*	Sextant/Mount	X	X4	X4	X
5131*	Engine Instruments	X	X7	X7	X7
514**	Landing Gear/Flap Indicating System	X	X	X	X
515**	Fuel Quantity System	X	X6	X6	X6
516**	Hydraulic Indicating System	X	X	X	X
517**	Electrical System Indicators	X	X	X	X
518**	Utility Instrumentation	X	X	X	X
519**	In-flight Refueling Instrumentation	X	X4	X4	X
52***	Autopilot	X	X4/8	X4/8	X
522**	Flight Control Augmenter System	X	X	X	X
5241*	N-1 Compass	X	X	X	X
5242*	J-4 Compass	X	X	X	X
61***	HF Communications	X	X9	X9	X
62***	VHF Communications	X	X10	X10	X
63***	UHF Communications	X	X11	X11	X

		Full System List (FSL)	Basic System List (BSL) (see legend below)		
WUC	**System/Subsystem**		**CFI**	**CCT**	**ALR**
64***	Interphone	X	X5	X5	X
65***	IFF	X	X12	X12	X
71B**	VOR	X	X	X	X
71Z**	TACAN	X	X	X	X
72C**	Rendezvous Equipment	X	X4	X4	X4
72Y**	Carousel Inertial Navigation System (INS)	X	X4/13	X4/13	X
72Z**	Search Radar	X	X4/14	X4/14	X
721**	APN-218 Doppler	X	X	X	X
721**	Doppler Navigation (DNS)	X	X13	X13	X

Legend:

ALR Airlift, Air Refueling
CCT Combat Crew Training
CFI Central Flight Instructor

NOTES:

1. Thermal curtains required.
2. Provide air and electrical power for engine start.
3. Normal air-conditioning or alternate pressurization operable. Automatic or manual temperature control; window and engine anti-ice protection available.
4. If mission requires.
5. Operational at all primary crew positions, to include instructor pilot and instructor boom operator.
6. Accurate fuel quantity indication required.
7. Sufficient to monitor engine operations. Analog or digital required.
8. Not required for traffic pattern ride only.
9. Required for overwater missions.
10. Not required if both UHF systems are operational.
11. Only one UHF system is required if the VHF system is operational.
12. Mode 3 and 3C required at all times.
13. Either INS or DNS needed for mission requirements.
14. One operational scope required for traffic pattern; both required for cell missions.

Attachment 28 (Added-AETC)

C-141B MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**ALA**	**ADA**	**ADP**	**ADR**	**ALM**	**SO**
11AA*	Windshields and Windows	X	X	X	X	X	X	X
11C**	Doors, Mechanical and Electrical	X	X	X	X1	X2	X	X
11C**	Emergency Door, Hatches and Exits	X	X	X	X	X	X	X
11FAH	Pressure Diaphragm	X	X	X	X	X	X	X
11FA*	Radome and Latches	X	X	X	X	X	X	X
11FDC	Tail Cone Assembly	X	X	X	X	X	X	X
11F**	Aerial Refueling Fairing	X	X	X	X	X	X	X
12B**	Flight Station Furnishings	X	X3	X3	X3	X3	X3	X3
12C**	Winches, Cables, Guides	X	X	X	X	X		X
12CAQ	Roller Conveyor Assembly	X	X	X		X		X
12D**	Stab Jack System	X	X	X	X	X	X	X
12E**	Aerial Delivery System	X		X	X	X		X
12FAO	Seat Kit Side Wall	X	X	X	X	X	X	X
12FB*	Paratroop Kit	X		X	X			X
12FD*	Litter Provision Kit	X					X	
13***	Landing Gear	X	X4	X4	X4	X4	X4	X4
14***	Flight Controls	X	X5	X5	X5	X5	X5	X5
23***	Turbofan Powerplant, TF-33	X	X6	X6	X6	X6	X6	X6
24***	Auxiliary Powerplant	X	X7	X7	X	X	X	X
41***	Air-Conditioning, Pressurization	X	X8	X8	X8	X8	X	X
42A**	Electrical Power, DC	X	X	X	X	X	X	X
42D**	Electrical Power, AC	X	X9	X9	X9	X9	X9	X9
42G**	Emergency Power System, AC/DC	X	X	X	X	X	X	X
44AA*	Lighting, Internal	X		X	X	X	X	
44AA*	Lighting, External	X	X10	X10	X10	X10	X10	X10
45A**	Hydraulic Systems 1, 2, and 3	X	X	X	X	X	X	X
46A**	Fuel System	X	X11	X11	X11	X11	X11	X11
47A**	Oxygen System	X	X	X	X	X12	X	X

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)					
			ALA	ADA	ADP	ADR	ALM	SO
49A**	Fire/Overheat, Extinguisher System	X	X	X	X	X	X	X
51AA*	Central Air Data Computer System	X	X	X	X	X	X	X
51BA*	Pitot Static System	X	X	X	X	X	X	X
51B**	Flight Director System	X	X13	X13	X13	X13	X13	X13
51BHA	Altimeter, Pressure	X	X13	X13	X13	X13	X13	X13
51C**	Airborne Flight Recorder	X					X	
51E**	Fuel Savings Advisory System	X						X14
52***	Automatic Flight Control System	X						X
55B**	Flight Data Recorder	X	X15					
55C**	Cockpit Voice Recorder	X15						
56DG*	Test Program Logic Computer	X	X	X	X	X	X	X
61B**	SECURE VOICE	X						
61***	UHF/VHF Radios	X	X13	X13	X13	X13	X13	X13
64A**	Intercom/Interphone System	X	X	X	X	X	X	X
65***	IFF	X	X	X	X	X	X	X
66***	Emergency Communication System	X						X
71D**	VHF Navigation System	X	X13	X13	X13	X13	X13	X13
71Z**	TACAN, AN/ARN-118	X	X13	X13	X13	X13	X13	X13
72K**	APS-133 System	X	X	X	X	X	X	X
73A**	APN-169B Station-Keeping Equipment	X		X	X	X		X
91***	Emergency Equipment	X	X	X	X	X	X	X
97***	Explosive Devices and Components	X	X	X	X	X	X	X

Legend:

ADA Aerial Delivery, Cargo
ADP Aerial Delivery, Personnel
ADR Aerial Delivery
ALA Airlift, Airland
ALM Airlift Evacuation, Medical
SO Special Operations

NOTES:

1. Cargo doors may be inoperative.
2. Troop doors may be inoperative.
3. Except work unit codes 12BAY and 12BAZ.
4. Home station departures must have all working. While off station, one brake per landing gear may be deactivated.
5. Aircraft commander, initial aircraft commander, instructor IP and AR ride must have all working. While off station, aileron trim system (WUC 14B**), rudder trim indicator (WUC 14DBA), and wing spoiler system (WUC 14H**) may be inoperative.
6. Three constant speed drives/generators must be operative; one each N2, EGT, fuel flow indicators is required.
7. Not required for aerial refueling.
8. Left air-conditioning pack must be operative.
9. Three generators required.
10. Taxi lights can be inoperative if landing lights are operable. Landing lights may be inoperative if taxi lights are operable.
11. Aerial refueling mission must have all pumps and gauges working. One extended range pump on either wing may be inoperative on other missions.
12. Cargo compartment oxygen is not required.
13. All student training missions must have all working. HF radios are not required for student training. While off station, one required.
14. If inoperative, the FSAS CDU must be replaced with an INS CDU.
15. MCI 11-241, Volume 4, *C-141 Operations-Minimum Equipment List (MEL) and Aircraft Operating Restrictions*, Table A2.8.
16. One may be operative for navigation, provided the attitude function and navigation selection panels are operative. The fully operational INS will be installed in the number 1 position.

Attachment 29 (Added-AETC)

C-130E/H MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)			
WUC	**System/Subsystem**		**ALC**	**AAD**	**PRO**	**OWM**
11***	Windshield and Windows	X	X	X	X	X
112**	Air Deflector Door	X		X		
113**	Crew/Paratroop Door	X	X	X	X	X
114**	Fuselage	X	X	X	X	X
115**	Wings and Nacelles	X	X	X	X	X
116**	Empennage	X	X	X	X	X
125**	Forward/Center/Aft Cargo	X	X	X	X	X
126**	Aerial Delivery System (ADS)	X		X		
128**	Dual Rail Cargo Handling Kit	X	X	X		X
13***	Landing Gear	X	X	X	X	X
14***	Flight Controls	X	X	X	X	X
145**	Control Surface Position Indicator	X			X	
22***	Turboprop Power Plant	X1	X1	X1	X1	X1
24***	Auxiliary Power Unit (APU) (74+ H Models)	X	X	X	X	X
241**	Gas Turbine Compressor (GTC)	X				
242**	Air Turbine Motor (ATM)	X	X	X	X	X
243AA	ATM Cooling Fan	X				
32***	Hyd Propeller	X	X2	X2	X2	X2
41LAO	AC-Flt Compartment (74+ H Models)	X3		X3	X3	
41RAO	AC-Cargo Compartment (74+ H Models)	X3		X3	X3	
411**	AC-Flt Compartment	X3		X3/4	X3/4	
412**	AC-Cargo Compartment	X3	X3/4	X3/4	X3/4	X4
413**	Pressurization	X	X	X	X	X
414**	Bleed Air System	X	X	X	X	X
415**	Anti-Ice/De-Ice Systems	X	X	X	X	X
418**	Instruments	X	X	X	X	X
419**	Under Floor Heat (74+ H Models)	X3		X3		X3
42***	Electrical Power Supply AC/DC	X	X	X	X	X
4411*	Nav Lights	X5	X5	X5	X5	X5
4412*	Landing Lights	X3/5	X3/5	X3/5	X3/5	X3/5
4413*	Anti-Collision Lights	X5	X5	X5	X5	X5
4414*	Taxi Lights	X3/5			X3/6	
4415*	Leading Edge Lights	X3/5			X3/6	
4416*	Formation Lights	X3/5		X3/5	X3/6	
4424*	Pedestal/Pilot Side Panel Lights	X	X6	X6	X6	X6

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)			
			ALC	AAD	PRO	OWM
4427*	Panel Lights	X	X6	X6	X6	X6
4428*	Warning Lights	X	X	X	X	X
443**	Emergency Exit Lights (Impact)	X	X	X	X	X
45***	Hydraulic and Pneumatic Power Supply	X	X	X	X	X
46***	Fuel Tanks	X7	X7	X7	X7	X7
46314	SPR Dual Level Control	X				
466**	Instruments, Fuel System	X	X8	X8	X8	X8
47***	Oxygen System	X	X	X	X	X
49***	Miscellaneous Utilities	X	X	X	X	X
495**	Windshield Wipers	X9	X9	X9	X	X9
49611	Bell, Personnel Warning	X	X	X	X	X
51HAA	Caution Advisory Panel (90+ H Models)	X	X	X	X	X
51HAB	Pilot/Co-Pilot Warning Panel (90+ H Models)	X	X	X	X	X
51HAC	Pilot Mode Advisory Panel (90+ H Models)	X	X	X	X	X
51J**	Ground Collision Avoidance System (90+ H Models and Modified E Models)	X	X	X	X	
51XC*	Sextant (Only for Training With GPS Installed)	X	X10	X10		X10
5111*	Pitot Static	X	X	X	X	X
51113	TCAS Vertical Speed indicator (93+ H Models)	X	X	X	X	X
51118	TAS Computer	X	X	X	X	X
5112*	Turn and Slip Indicating System	X	X	X	X	X
5113A	Standby ADI (90+ H Models)	X	X	X	X	X
5113*	Attitude Indicating System	X	X	X	X	X
5114*	Navigation Instruments	X	X	X	X	X
512**	FS109 Flight Director (73+ H Models)	X	X	X	X	X
513**	TAS	X	X	X	X	X
515**	MA-1 Flight Director System	X	X	X	X	X
517**	Electrical Group "A"	X	X	X	X	X
518**	AF Standard Flt Director System	X	X	X	X	X
519**	Standby Compass System	X	X	X	X	X
521**	B-4 Auto Pilot	X	X			X
522**	N-1 Compass System	X	X11	X11	X11	X11
523**	C-12 Compass System	X	X11	X11	X11	X11
524**	CADC (AWADS E Models)	X	X	X	X	X
526DA	EFIS (90+ H Models)	X	X	X	X	X
526**	FCS-105 Auto Pilot (73+ H Models)	X	X	X		X
56A**	Cockpit Voice Recorder	X3	X3	X3	X3	X3
56B**	Flight Data Recorder	X	X3	X3	X3	X3

		Full System List (FSL)	Basic System List (BSL) (see legend below)			
WUC	**System/Subsystem**		**ALC**	**AAD**	**PRO**	**OWM**
615**	HF (AN/ARC-190)	X	X12	X12		X12
62X**	VHF (AF/ARC-186)	X	X12	X12	X12	X12
63A**	UHF (AN/ARC-164)	X	X12	X12	X13	X12
63M**	UHF (ARC-164) Have Quick II	X	X12	X12	X12	X12
641**	Intercom System - General	X	X14	X14	X14	X14
642**	Intercom (AF/AIC-18A)	X	X	X	X	X
644**	Intercom (AN/AIC-25)	X	X	X	X	X
65JA*	IFF System (APX-100) (90+H Models)	X	X	X	X	X
65***	IFF System (APX-72)	X	X	X	X	X
66***	Emergency Communications/ELT	X	X	X	X	X
663**	Underwater Acquistic Locator System	X3				X3
68B**	SATCOM (URC-108)	X				
6921*	UHF Direction Finder (AN/ARA-25)	X	X12	X12		X12
6923*	UHF Direction Finder (AN/ARA-50)	X	X12	X12		X12
69250	UHF/VHF DF301B Direction Finder	X	X12	X12		X12
696**	KY-58 Secure Voice	X	X12	X12		X12
697**	KY-75 Secure Voice	X	X12	X12		X12
71A**	ADF	X	X			
71AC*	Radio Compass (AN/ARN-149)	X	X			
71C**	VOR/ILS/MB (AN/ARN-147)	X12	X12	X12	X12	X12
71E**	GPS	X3		X3/15	X3/15	X3/15
71GA*	IDCU	X	X16	X16	X16	X16
71GB*	BICU	X	X	X	X	X
71GE*	RLG INU	X17	X17	X17	X17	X17
71J**	Microwave Landing System	X				
71KD*	HSI Interface (90+ H Models)	X	X	X	X	X
712**	TACAN (AN/ARN-118)	X12	X12	X12	X12	X12
711**	Radio Compass (AN/ARN-6)	X				
71113	BDHI	X				
72K**	Low Power Color Radar (AN/APN-24) (92+ H Models)	X				X
72R**	Multimode Radar (AN APO-175) (AWADS E Models)	X				X
72X**	Freon Press System (AWADS E Models)	X				X
721**	Doppler Velocity Sensor (AN/ARN-218)	X				X
7217*	CARA (AN APN-232)	X	X	X	X	X
7232*	Waveguide Pressurization System	X				X
727A*	Search Radar (AN/APN-59F)	X			X18	X
728**	Radar (AN/APN-59E/F)	X				X
729**	SKE (AN/APN-169C(V))	X		X19		X19
76A**	Flare/Chaff Dispenser (AN/ALE-40)	X	X20	X20	X20	X20

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)			
			ALC	AAD	PRO	OWM
76B**	Radar Warning Receiver (AN/ALR-69)	X	X20	X20	X20	X20
76J**	Missile Warning (AN/AAR-47)	X	X20	X20	X20	X20
76N**	Flare/Chaff Dispenser (AN/ALE-47)	X	X20	X20	X20	X20
76R**	IR Countermeasures (AN/ALQ-157)	X	X20	X20	X20	X20
91113	Escape Rope	X	X	X	X	X
91213	Life Raft (Type F-2)	X				X

Legend:

AAD Aerial Delivery
ALC Airlift Cargo
OWM Overwater Mission
PRO Pilot Proficiency (FTU Only)

NOTES:

1. WUC 22DBF datum amplifier, 22EBD temp datum amplifier, 22EBH low speed idle solenoid, 22GF0 oil cooler door position indication, and 22GG0 oil quantity indication may be inoperative.
2. WUC 32532 solid state synchrophaser may be inoperative.
3. Required as per AFI 11-2C-130, Volume 3.
4. Manual mode required for PMC.
5. As per AFI 11-202, Volume 3, *General Flight Rules*, and AETC Supplement 1.
6. Required for night flight.
7. WUC 46212 auxiliary tank boost pumps, and 46213 pylon tank boost pumps may be inoperative.
8. Fuel tank quantity indication allowed to be inoperative provided fuel quantity is verified: both auxiliary tanks, one external tank, two nonisometrical main tanks.
9. Pilot's side only.
10. One required on SCNS aircraft for FMC.
11. One required with operational GPS installed.
12. One required.
13. Number 1 UHF manual control head required.
14. WUC 64120 AN/ARC-13 public address system is not required.
15. Required for transporting passengers.
16. Two required.
17. Two required for 90+ H models.

18. Required for flights departing the local radar pattern.
19. Multiship formations only.
20. If installed, required for hostile environment operations.

Attachment 30 (Added-AETC)

MC-130P MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**SAR**	**NVG**	**AR**	**Ferry**	**AAD**	**OWM**
11***	Windshield and Windows	X	X	X	X	X	X	X
112**	Aft Cargo Ramp and Door	X	X	X	X	X	X	X
1129*	Air Deflector Door	X	X1	X1	X1	X1	X1	X1
113**	Crew and Paratroop Doors, Emergency Doors, Hatches, Exits	X	X	X	X	X	X2	X
114**	Fuselage, Wings, Nacelles, Empennage	X	X	X	X	X	X	X
122**	Flight Deck	X	X	X	X	X	X	X
123**	Forward, Center, Aft Cargo	X	X	X	X	X	X	X
126**	Aerial Delivery System	X					X	
13***	Landing Gear System	X	X	X	X	X	X	X
14***	Flight Controls	X	X	X	X	X	X	X
22***	Turbo Prop Powerplant	X	X3	X3	X3	X3	X3	X3
24***	Gas Turbine Compressor	X	X	X4	X4	X4	X4	X4
242**	Air Turbine Motor, Cooling Fan	X	X	X	X	X	X	X
32***	Hydraulic Propeller	X	X	X	X	X	X	X
41***	Air-Conditioning and Pressurization	X	X	X5	X5		X5	X
414**	Bleed Air, Anti-Ice/De-Ice System	X	X6	X6	X6		X6	X6
4151*	Propeller Anti-icing and Deicing	X	X	X	X	X	X	X
42***	Electrical Power Supply, AC	X	X	X	X	X	X	X
42***	Electrical Power Supply, DC	X	X	X	X	X	X	X
441**	External Lighting	X	X7	X7	X7	X7	X7	X7
442**	Internal Lighting	X	X	X	X	X	X	X
451**	Hydraulic System	X	X	X	X	X	X	X
461**	Fuel System	X7	X8	X8	X8	X8	X8	X8
467**	Aerial Refuel System	X	X		X			
472**	Liquid/Gaseous Oxygen System	X	X1	X1	X1	X1	X1	X1

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)					
			SAR	NVG	AR	Ferry	AAD	OWM
491**	Fire/Overheat and Extinguisher System	X	X	X	X	X	X	X
495**	Windshield Wiper	X	X	X	X	X	X	X
496**	Personnel Warning Bell	X	X	X	X	X	X	X
51X**	Sextant and Mount	X						X
51***	Instruments	X	X	X	X	X	X	X
51151	Free Air Temperature Indicator	X						
519**	Standby Compass System	X	X	X	X	X	X	X
521**	E-4 Autopilot	X	X					X
523**	C-12 Compass System	X	X1	X1	X1	X1	X1	X1
56A**	Cockpit Voice/Flight Data Recorders	X	X	X	X	X	X	X
615**	HF Communications, AN/ ARC-190	X	X1	X1	X1		X1	X1
62A**	VHF Communications, AN/ ARC-186	X	X9	X1	X1	X1	X1	X1
63M**	UHF Communications, AN/ ARC-164	X	X9	X9	X9	X9	X9	X9
64***	Intercom System, AN/AIC-18 and -25	X	X10	X10	X10	X10	X10	X10
65***	IFF, APX-64, and KIT-1C	X	X11	X11	X11	X11	X11	X 11
66***	Emergency Communication and Locator	X	X	X	X	X	X	X
663**	Underwater Acoustic Locator	X	X					X
692**	UHF/ADFs, AN/ARA-25 and -50	X	X1					
696**	SECURE VOICE, KY-58 and KY-75	X	X1	X1	X1		X1	X1
71C**	VOR/ILS/MB, AN/ARN-147	X	X1	X1	X1	X1	X1	X1
71GAO	Integrated Control Display Unit	X	X	X	X	X12	X	X12
71GBO	Bus Integration Computer Unit	X	X	X	X	X	X	X
71GEO	Ring Laser Gyro/Inertial Navigation Unit	X	X	X	X	X	X	X
71Z**	TACAN, AN/ARN-118	X	X1	X1	X1	X1	X1	X1
7123*	Marker Beacon (Collins 51Z-4)	X						

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)					
			SAR	NVG	AR	Ferry	AAD	OWM
7193*	ADF	X						
721**	Doppler Velocity Sensor, AN/APN-121	X		X			X	
7223*	CARA, AN/APN-232	X	X13	X13			X13	X13
7232*	Radar Press System, AN/APN-59	X	X	X	X	X	X	X
728**	Radar Press System, AN/APN-59E (V)/-59F (V)	X	X	X	X	X14	X14	X
76A**	Flare/Chaff Dispenser, AN/ALE-40	X		X12	X12		X12	
76B**	Radar Warning Receiver, AN/ALR-69	X		X12	X12		X12	
76E**	Infrared Warning AN/AAR-44	X		X12	X12		X12	
77H**	Infrared Detection AN/AAQ-17	X	X	X15	X15		X15	
91***	Emergency Equipment	X16	X	X	X	X	X	X16
97A**	Explosive Devices, Fire Ext Squib	X	X	X	X	X	X	X

Legend:

AAD Aerial Delivery
AR Air Refueling
Ferry Depot Ferry Flights
NVG Night Vision Goggles
OWM Overwater Mission
SAR Search and Rescue

NOTES:

1. One required.
2. Required if paratroop door drops are planned.
3. Temperature datum system "Auto" function may be inoperative, other than for engine start. Oil flap actuator may be inoperative provided actuator is fully open. Low speed ground idle function may be inoperative provided maintenance verifies problem exists in solenoid.
4. Gas turbine compressor not required provided destinations are equipped with ground air carts.
5. Pressurization not required. A/C not required when OAT is 50-85 degrees Fahrenheit.

6. Anti-ice/deicing system required for flying in icing conditions; minimum of one ice detector operative on either number 2 or number 3 engine.
7. One strobe, taxi, and landing light required. Formation lights required on NVG missions.
8. Fuel tank quantity indicators allowed to be inoperative: both auxiliary tanks, one external tank, and one main tank per wing (not symmetrical). One pylon tank boost pump in each external tank may be inoperative.
9. Number 1 position required.
10. Public address system may be inoperative. Required with passengers.
11. TS-1843 inline test set inoperative, system operation verification required by maintenance. Kit 1C required for ADIZ penetration on OWM.
12. Only required for electronic warfare (EW) training sortie/combat.
13. Pilot's indicator required.
14. Required if thunderstorms are forecasted or reported along route of flight.
15. Required for SOFI training.
16. Liferafts required.

Attachment 31 (Added-AETC)

MC-130H MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**PFT**	**LOL**	**IFR**	**ECM**	**Ferry**	**AAD**
11***	Windshield and Windows	X	X	X	X	X	X	X
1123*	Aft Cargo Ramp and Door	X	X	X	X	X	X	X
11299	Air Deflector Door	X				X		X1
1131*	Crew and Paratroop Doors	X	X	X	X	X	X	X1
1133*	Emergency Doors, Hatches, Exits	X	X	X	X	X	X	X
114**	Fuselage, Wings, Nacelles, Empennage	X	X	X	X	X	X	X
122**	Flight Deck	X	X	X	X	X	X	X
123**	Forward/Center/Aft Cargo	X	X	X	X	X	X	X
126**	Aerial Delivery System	X		X2				X
131**	Landing Gear System	X	X	X	X	X	X	X
141**	Flight Controls	X	X	X	X	X	X	X
22***	Turbo Prop Powerplant	X	X3	X3	X3	X3	X3	X3
24***	Auxiliary Power Unit	X	X	X	X	X	X	X
32***	Hydraulic Propeller	X	X	X	X	X	X	X
41***	Air-Conditioning and Pressurization System	X	X4	X4	X4	X4	X4	X4
414**	Bleed Air, Anti-Ice/Deice, Instruments, and Air-Conditioning System	X	X5	X5	X5	X5	X5	X5
4151*	Propeller Anti-Ice/Deicing	X	X	X	X	X	X	X
42***	Electrical Power Supply, AC	X	X	X	X	X	X	X
42***	Electrical Power Supply, DC	X	X	X	X	X	X	X
441**	External Lighting	X	X	X	X	X	X	X
442**	Internal Lighting	X	X6	X6	X6	X6	X6	X6
451**	Hydraulic System	X	X	X	X	X	X	X
461**	Fuel System	X	X7	X7	X7	X	X	X
46W**	Universal Air Refuel Receptacle Slipway Installation	X	X8	X8	X	X8	X8	X8
472**	Liquid/Gaseous Oxygen System	X	X	X	X	X	X	X
49A**	Toilet	X	X9	X9	X9	X9	X9	X9

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**PFT**	**LOL**	**IFR**	**ECM**	**Ferry**	**AAD**
491**	Fire/Overheat Detection and Extinguisher System	X	X	X	X	X	X	X
495**	Windshield Wiper	X	X	X	X	X	X	X
496**	Personnel Warning Bell	X	X	X	X	X	X	X
51***	Instruments, Flight and Navigation	X	X10	X10	X10	X10	X10	X10
523**	C-12 Compass System	X	X11	X11	X11	X11	X11	X11
526**	Flight Control System, FCS-105	X	X12	X12	X12	X12	X12	X12
615**	HF Communications, AN/ ARC-190	X		X			X13	
62B**	VHF Communications	X	X13	X13	X13	X13	X13	X13
63M**	UHF Communications, AN/ ARC-164 (V)	X	X	X	X	X	X	X
645**	Intercom System, AIC-30	X	X	X	X	X	X	X
65HA*	KIT-1A-T-Sec Comp	X						
65JA*	IFF, AN/APX-100	X	X	X	X	X	X	X
6617*	Emergency Locator Transmitter	X	X	X	X	X	X	X
663**	Underwater Acoustic Locator	X					X	
68E**	SATCOM, UHF Radio, AN/ ARC-187 (V) 16	X						
692**	UHF/VHF ADF, OA-8697A/ARD	X						
697**	SECURE VOICE, KY-75	X						
71AC*	ADF, DF-206A	X	X13	X13	X13	X13	X13	X13
71B**	VOR/Instrument Landing System, AN/ARN-127	X	X13	X13	X13	X13	X13	X13
71Z**	TACAN, AN/ARN-118	X	X13	X13	X13	X13	X13	X13
72BA*	Radar, Beacon Transponder AN/APX-78	X						
72V**	Radar, AN/APQ-170 (V)	X	X14	X	X14	X14	X14	X
72ZG*	Inertial Navigation System, SKN-244	X	X	X	X	X	X	X
7223*	CARA, AN/APN-232	X	X13	X	X13	X13	X13	X
7232*	Radar Pressurization System	X	X	X	X	X	X	X
7234*	Interface Blanker Unit, CN-1650	X		X15		X		
76A**	Flare/Chaff Dispenser, AN/ ALE-40	X		X16		X16		

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)					
			PFT	LOL	IFR	ECM	Ferry	AAD
76B**	Radar Warning Receiver, AN/ALR-69	X		X17		X		
76D**	Panoramic Receiver, AN/ APR-46A	X		X17		X		
76E**	Infrared Warning, AN/AAR-44	X		X17		X		
76K**	Jammers, Fwd and Aft, AN/ ALQ-172 (V)	X		X17		X		
76YF*	Electronic Countermeasures, AN/QRC 84-02A	X		X17		X		
77F**	Infrared Detector System, AN/AAQ-15	X		X17				
82B**	Control Set, AN/ASQ-204	X	X	X	X	X	X	X
91***	Emergency Equipment	X	X	X	X	X	X	X

Legend:

AAD Aerial Delivery
ECM Aerial Intercepts; ECM Range
Ferry Depot Ferry Flights
IFR In-flight Refueling
LOL Low Level
PFT Proficiency Flying Time

NOTES:

1. Required if paratroop door drops are planned.
2. Aerial delivery system equipment is required if off-the-ramp drops are planned. Dual rail cargo system required for some airdrops.
3. Oil cooler augmentation not required. Temperature datum system "Auto" function may be inoperative, other than for engine start. Oil cooler flap actuator may be inoperative provided actuator is fully open. Low speed ground idle function may be inoperative provided maintenance verifies problem exists in solenoid.
4. Flight compartment air-conditioning may be required for avionics cooling depending on temperature and pressure altitude (refer to T.O. 1C-130 (M) H-1). Pressurization may be required for avionics cooling or to complete specific mission profiles. Both air-conditioning systems are required for avionics cooling (refer to T.O. IC-130 (M) H-1). Pressurization may be required for avionics cooling and to complete mission profiles.

5. Anti-ice/deicing system required for flying in icing conditions; minimum of one ice detector operative on either number 2 or number 3 engine.
6. Interior lighting as required for night vision goggle use and other operational requirements.
7. Local training flights may be conducted with two inoperative main tank indicators provided inoperative indicators are asymmetrical and not on same wing, and quantity is verified with a dipstick. One external fuel tank indicator may be inoperative provided both external tanks are checked full or empty. Both auxiliary tank indicators may be inoperative provided auxiliary fuel quantity is verified. *Exception:* For in-flight refueling (IFR) missions, all IFR components must be operational as well as fuel gauges for tanks that are to be refueled.
8. Required for IFR designated missions.
9. Flush type toilet or urinal required for missions of less than 6 hours. Flush type toilet required for flights longer than 6 hours.
10. Sextant is not required.
11. Number one C-12 compass is required.
12. May be required for planned extended crew-duty day in excess of 12 hours.
13. One system required.
14. Weather mode radar is required for flights into areas of known or forecasted thunderstorms.
15. Required when electronic countermeasures (ECM) use is planned.
16. Required when expendable use is planned. Applicable to certain ECM training and air intercept missions.
17. May be required depending on mission profile.

Attachment 32 (Added-AETC)

UH-1N MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**TT**	**NVG**	**SAR**	**CNV**	**IMC**	**REM**
11***	Airframe	X	X	X	X	X	X	X
11EA*	Fuselage Compartments	X	X	X	X	X	X	X
12A**	Cargo Hook	X						
13***	Landing Gear	X	X	X	X	X	X	X
14***	Flight Controls	X	X	X	X	X	X	X
15***	Rotor System	X	X	X	X	X	X	X
22***	Turboshaft Power Plant Assembly	X	X	X	X	X	X	X
26***	Rotary Wing Drive System	X	X	X	X	X	X	X
41***	Bleed Air Heater	X1	X1	X1	X1	X1	X1	X1
42***	Electrical Power Supply	X	X	X	X	X	X	X
441**	Internal Lighting System	X	X	X	X	X	X	X
442**	External Lighting System	X	X	X	X	X	X	X
45***	Hydraulic Power Supply System	X	X	X	X	X	X	X
46***	Fuel System	X	X	X	X	X	X	X
49***	Miscellaneous Utilities	X2	X2	X2	X2	X2	X2	X2
51***	Instruments	X	X	X	X	X	X	X
62***	VHF Communications (AM)	X	X	X	X	X	X	X
63***	UHF Communications	X	X	X	X	X	X	X
64***	Interphone	X	X	X	X	X	X	X
65***	IFF	X	X	X	X	X	X	X
7121*	TACAN	X		X	X		X	
7111*	UHF Direction Finder	X			X			
7151*	Marker Beacon	X			X		X	
72***	Radar Altimeter	X		X	X	X	X	
91***	Emergency Equipment	X	X	X	X	X	X	X

Legend:

CNV Conventional
IMC Instrument Meteorological Conditions
NVG Night Vision Goggles
REM Remote
SAR Search and Rescue
TT Tactical Training

NOTES:

1. Kirtland: As required seasonally or on flights of more than 1 hour duration at temperatures below 10 degrees Celsius.
2. Kirtland: Flotation collar required only on water hoist training flights.

Attachment 33 (Added-AETC)

HH-60G MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)						
WUC	**System/Subsystem**		**EP**	**IMC**	**XC**	**OWM**	**TTD**	**NVG**	**TTN**
11***	Airframe	X	X	X	X	X	X	X	X
12***	Cockpit/Fuselage Compartment	X	X	X	X	X	X	X	X
13***	Landing Gear System	X	X	X	X	X	X	X	X
14***	Flight Controls	X	X	X	X	X	X	X	X
15***	Rotor System	X	X	X	X	X	X	X	X
22***	Turboshaft Engines	X	X	X	X	X	X	X	X
24***	Auxiliary Power Plant	X	X	X	X	X	X	X	X
26***	Rotor Drive System	X	X	X	X	X	X	X	X
41***	Environmental Control System	X	X1	X1	X1	X1	X1	X1	X1
42***	Electrical Power Supply	X	X	X	X	X	X	X	X
4411*	Exterior Lights	X2	X2	X2	X2	X2	X2	X2	X2
4412*	Interior Lights	X		X3	X3			X3	X3
45***	Hydraulic Power System	X	X	X	X	X	X	X	X
455**	Auxiliary Power Unit System	X	X	X	X	X	X	X	X
4611*	Fuel System	X	X	X4	X4	X4	X4	X4	X4
49***	Fire Detect/Extinguisher System	X	X	X	X	X	X	X	X
4903*	Windshield Wiper System	X	X	X	X	X	X	X	X
4904*	Rescue Hoist System	X			X	X	X	X	X
491**	Cargo Hook System	X			X			X	X5
512**	Navigation Instruments	X		X	X	X	X	X	X
51A/B**	Flight/Engine Instruments	X	X	X	X	X	X	X	X
51C**	Voice Altitude Warning System	X				X		X	X
52***	AFCS System	X	X	X	X	X	X	X	X
561**	Vertical Gyro System	X	X	X	X	X	X	X	X
57A**	FLIR System AAQ-16	X							
61A**	AN/ARC-199	X			X	X	X	X	X
621**	VHF (FM) Radio AN/ARC-186	X			X	X	X	X	X

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)						
			EP	IMC	XC	OWM	TTD	NVG	TTN
622**	VHF (AM) Radio AN/ARC-186	X	X	X	X	X	X	X	X
631**	UHF (AM) Radio AN/ARC-164	X	X	X	X	X	X	X	X
64***	Intercom System	X	X	X	X	X	X	X	X
65***	IFF	X	X	X	X	X	X	X	X
66***	Radio Set/Personnel Locator	X			X	X	X	X	X
68***	Satellite Communications	X					X		X
69***	Secure Communications	X					X6		X6
711**	LF/ADF System AN/ARN-89	X							
7121*	VOR NAV AN/ARN-123	X		X				X	X
71A**	TACAN AN/ARN-118	X		X	X		X	X	X
71B**	UHF Directional Finder	X			X	X	X	X	X
71C**	Inertial Navigation System	X			X	X	X	X	X
71D**	Map Reader, KG-10-21	X							
71F**	Doppler, AN/ASN-137	X			X	X	X	X	X
71G**	Inertial Navigation Unit	X							
72***	Radar Altimeter	X							
72A**	Color Radar, APN-239	X			X	X			
751**	Armament, M60D	X					X		X
76***	Countermeasures	X					X		X
82***	Computer, Data Display	X							
91***	Emergency Equipment	X	X	X	X	X	X	X	X

Legend:

EP Emergency Procedures
IMC Instrument Meteorological Conditions
NVG Night Vision Goggles
OWM Overwater Mission
TTD Tactical Training, Day
TTN Tactical Training, Night
XC Off-Station Sortie

NOTES:

1. Heater required for flights over 1 hour duration when temperatures are below 10 degrees Celsius.

2. Must have one strobe light as a minimum.
3. Required for night off-station sorties.
4. Air refuel system is required.
5. Cargo hook cartridge is not required.
6. Operations maintain and supply digital data burst.

Attachment 34 (Added-AETC)

MH-53J/TH-53A MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC (note 1)	**System/Subsystem**		**EP**	**IMC**	**XC**	**TTD**	**TTN**	**PAV** (note 2)
11**	Airframe	X	X	X	X	X	X	X
12***	Cockpit/Fuselage Compartment	X	X	X	X	X	X	X
12***	Plural Hemp Bar Assembly	X				X	X	X
13***	Landing Gear System	X3	X3	X3	X3	X3	X3	X3
14***	Flight/Fuselage Controls	X	X	X	X	X	X	X
15***	Rotor System	X4	X	X	X	X	X	X
22***	Turboshaft Engines	X5/6	X5	X5	X5/6	X5	X5	X5
24***	Auxiliary Power Unit	X	X	X	X	X	X	X
26***	Rotor Drive System	X7	X7	X7	X7	X7	X7	X7
41***	Environmental Control System	X8	X8	X8	X8	X8	X8	X8
42***	Electrical Power Supply	X	X	X	X	X	X	X
44***	Interior/Exterior Lights	X9	X9	X9	X9	X9	X9	X9
45***	Hydraulic/Pneudraulic System	X	X10	X10	X	X	X	X
46***	Fuel System	X11	X11	X11	X11	X11	X11	X11
46***	Air Refuel System	X			X	X	X	X
49***	Fire Detect/Extinguisher System	X	X	X	X	X	X	X
49***	Windshield Wiper System	X		X	X	X	X	X
49***	Cargo Hook System	X				X	X	
49***	Rescue Hoist System	X			X	X	X	X
51***	Instruments	X	X	X	X	X	X	X
51***	Cruise Guide System	X						
52***	Autopilot System	X12	X12	X12	X12	X12	X12	X12
52B**	Hover Coupler System	X2						X
52***	C-12 Compass System	X	X	X	X	X	X	X
57***	Integrated Guidance Systems	X					X2	X
61***	HF Radio AN/ARC-190	X			X	X	X	X
62***	VHF Radio	X	X	X	X	X	X	X
62B**	VHF Secure	X2					X2	
63***	UHF Radio	X	X	X	X	X	X	X
63B**	UHF Secure	X2					X2	
63C**	SATCOM Radio	X2/13						

WUC (note 1)	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below) EP	IMC	XC	TTD	TTN	PAV (note 2)
64***	Intercom System	X	X	X	X	X	X	X
65***	IFF	X	X14	X14	X14	X14	X14	X14
69***	Miscellaneous Communications	X2						
69C**	HF Secure (KYV-5)	X2						
71***	TACAN AN/ARN-118	X		X	X	X	X	X
71***	ILS/Marker Beacon	X		X	X	X	X	X
71***	VOR Localizer	X		X	X	X	X	X
71E**	PLS AN/ARS-6	X2						X15
71***	GPS System	X				X	X	X
72***	Radar Altimeter	X				X	X	X
72***	Doppler Navigation System	X				X	X	X
72C**	TF/TA Radar	X2						X
73A**	Projected Map Display	X2					X2	X
74A**	FLIR AN/APQ-18	X2					X2	X
75***	Weapons Delivery	X13				X13	X13	X13
76***	Countermeasures	X2/13				X2/13	X2/13	X2/13
77***	Photographic/Recon	X2/13				X2/13	X2/13	X2/13
91***	Emergency Equipment	X	X	X	X	X	X	X
97***	Explosive Items	X13	X13	X13	X13	X13	X13	X13

Legend:

EP Emergency Procedures
IMC Instrument Meteorological Conditions
PAV PAVELOW
TTD Tactical Training, Day
TTN Tactical Training, Night
XC Off-Station Sortie

NOTES:

1. Due to the differences in the subsystem WUCs between the MH-53J and TH-53A, only the first two digits of the subsystem WUCs will be used.
2. MH-53J only.
3. Landing gear may be inoperative if it can be pinned in the down position. Brakes are required for all flights. Tail skid may be pinned down if inoperative except for gun missions and live team training.

4. Blade/Pylon fold required for shipboard operations training.
5. Engine air particle separator blower must be operational with doors closed. Auxiliary oil tank not required for TH-53A. Beeper trim not required.
6. Auxiliary oil tanks required for extended range over water, MH-53J.
7. Rotor brakes must be operational for shipboard operations.
8. Heater system is required for flights over 1 hour in duration below 10 degrees Celsius. Anti-ice system is required for all flights except EP.
9. Exterior cargo loading, NLG down, main rotor head, tail position, land/hover blade tip lights, interior cargo loading and SX-5 lights not required. Flashing position lights only required for air refueling.
10. The cargo ramp may be inoperative as long as the cargo ramp can be secured in the "up" or "closed" position.
11. External/internal auxiliary fuel quantity indicators are not required. Internal Robertson fuel tank is considered an integral part of the TH-53A fuel system.
12. Required for initial takeoff and all flight crew duty days over 12 hours.
13. If installed.
14. IFF mode 3C and 4 required, mode 1 and 2 not required for local sorties.
15. Required for search and rescue missions, MH-53J only.

Attachment 35 (Added-AETC)

T-6 MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)									
WUC	**System/Subsystem**		**DCF**	**NCF**	**DIT**	**NIT**	**DFT**	**NFT**	**DLA**	**NLA**	**DHA**	**NHA**
11***	Airframe	X	X	X	X	X	X	X	X	X	X	X
11E**	Windshield and Canopy	X	X1	X1	X1	X1	X1	X1	X1	X1	X1	X1
12***	Cockpit	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
13***	Landing Gear	X	X	X	X	X	X	X	X	X	X	X
13E**	Brakes	X	X3	X3	X3	X3	X3	X3	X3	X3	X3	X3
14***	Flight Controls	X	X4	X4	X4	X4	X4	X4	X4	X4	X4	X4
22***	Power Plant	X	X5	X5	X5	X5	X5	X5	X5	X5	X5	X5
33***	Propeller	X	X	X	X	X	X	X	X	X	X	X
41***	Air-Conditioning and Pressurization	X	X6	X6	X6	X6	X6	X6	X6	X6	X6	X6
42***	Electrical Power	X	X	X	X	X	X	X	X	X	X	X
44AA*	Cockpit Lights	X		X2		X2		X2		X2		X2
44AAA	Warning Lights	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
44BA*	External Lighting	X	X7	X7	X7	X7	X7	X7	X7	X7	X7	X7
44BBB	Landing/Taxi Lights	X	X8	X8	X8	X8	X8	X8	X8	X8	X8	X8
45***	Hydraulic	X	X	X	X	X	X	X	X	X	X	X
46***	Fuel	X	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2
47***	Oxygen	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
49A**	Fire Detection System	X	X	X	X	X	X	X	X	X	X	X
51A**	Panels and Multipurpose Components (Flight Instruments)	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
51AD*	Stall Warning System (Angle of Attack)	X	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10
51BA*	Independent Instrumentation (Standby Instruments)	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
51BAD	Clock	X			X11	X11			X11	X11	X11	X11
51BAE	Accelerometer	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)									
			DCF	NCF	DIT	NIT	DFT	NFT	DLA	NLA	DHA	NHA
57AA*	Attitude/Heading Reference System (AHRS)	X	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12
57AB*	Electronic Flight Instrument System (EFIS)	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
57AC*	Integrated Automatic Tuning	X	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13
62A**	VHF Communication	X	X	X	X	X	X	X	X	X	X	X
63A**	UHF Communication	X	X14	X14	X14	X14	X14	X14	X14	X14	X14	X14
64A**	Interphone System	X	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15
65A**	Transponder	X	X16	X16	X16	X16	X16	X16	X16	X16	X16	X16
71A**	VHF Navigation	X	X17	X	X17	X	X17	X	X17	X	X17	X
71BA*	GPS	X		X18	X18	X18		X18	X18	X18	X18	X18
91***	Emergency Equipment	X	X	X	X	X	X	X	X	X	X	X
97***	Explosive Devices	X	X	X	X	X	X	X	X	X	X	X

Legend:

DCF Day Contact Familiarization

NCF Night Contact Familiarization

DIT Day Instrument

NIT Night Instrument

DFT Day Formation

NFT Night Formation

DLA Day Low-Altitude Navigation

NLA Night Low-Altitude Navigation

DHA Day High-Altitude Navigation

NHA Night High-Altitude Navigation

NOTES:

1. Aircraft with canopy or windscreen distorted/crazed within T.O. limits are restricted to day dual local visual meteorological conditions (VMC) and no formation flights (Rated pilot decision).
2. Aircraft may be flown solo with discrepancies in rear cockpit that do not affect safety of flight.
3. Restricted to dual day local, dual local instrument meteorological conditions (IMC), or solo with a rated pilot for first flight when brake system has been bled due to component removal, replacement, or installation (JPPT only).
4. Trim aid device not a required subsystem. Failure does not impact flight safety.
5. Aircraft with engines that require special oil analysis surveillance and or sampling are restricted to local missions. Restricted to ferry flight, in manual mode, by rated pilot.
6. Air-conditioning manual mode required if auto mode is inoperative.
7. Wing and taillights not required for day flights. However, if a day flight takeoff extends into a night flight, lights will be operational before takeoff.
8. Either landing or taxi light must be operational, restricted to day local VMC (dual or solo). Continued flight with one bulb inoperative allowable.
9. Restricted to rated pilot if fuel auto balance system is inoperative. Single point refueling not required.
10. Restricted to flight by rated pilot.
11. One clock must be operational in each cockpit.
12. For a standby magnetic compass swing required by maintenance, the aircraft is restricted to dual day local VMC or solo with a rated pilot.
13. Fault Code and side channel discrepancies allowable if it does not affect system operation.
14. May be inoperative if the VHF communication system is operational. Required for student solo.
15. Ground crew amplifier not required.
16. Restricted to day local VMC for home field pattern only missions with local air traffic control approval.
17. Restricted to day local VMC.
18. May be inoperative if not needed for syllabus training.

Attachment 36 (Added-AETC)

T-38C MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**CNT**	**FOR**	**LOL**	**NT**	**AAC**	**ASC**
11***	Airframe	X	X	X	X	X	X	X
11***	Windshield/Canopy	X	X1	X1	X1	X1	X1	X1
121**	Cockpit and Controls	X	X1	X1	X1	X1	X1	X1
13***	Landing Gear and Brakes	X	X	X	X	X	X	X
14***	Flight Controls	X	X	X	X	X	X	X
23***	Turbojet Power Plant/Gearboxes	X	X2	X2	X2	X2	X2	X2
23KDU	Electronic Engine Display	X	X3	X3	X3	X3	X3	X3
41***	Air-Conditioning, Pressurization, and Anti-Ice Control	X	X1	X1	X1	X1	X1	X1
42***	Electrical System	X	X	X	X	X	X	X
4411*	Exterior Lights	X	X4	X4	X4	X4	X4	X4
442**	Interior Lights	X	X1/5	X1/5		X1/5		
45***	Hydraulic and Pneumatic Power	X	X1	X1	X1	X1	X1	X1
46***	Fuel System	X	X	X	X	X	X	X
47***	Oxygen System	X	X1	X1	X1	X1	X1	X1
49***	Miscellaneous Utilities (Fire Detection)	X	X	X	X	X	X	X
51***	Standby Instruments	X6	X1	X1	X1	X1	X1	X1
5112*	Air Data Computer/TAT Probe	X	X	X	X	X	X	X
51241	Mission and Data Processor	X	X	X	X	X	X	X
51243	Head-Up Display	X	X3	X3	X3	X3	X3	X3
51247	Up-Front Control Panel	X	X1	X1	X1	X1	X1	X1
51248	Multifunction Display	X	X1	X1	X1	X1	X1	X1
513**	Angle of Attack (AOA)	X7	X3	X3	X3	X3	X3	X3
55A**	Camera System	X					X	X
55C**	Data Transfer System	X	X3	X3	X3	X3	X3	X3
62A**	VHF Radio System	X	X8	X8	X8	X8	X8	X8
63D**	UHF Radio System	X	X8	X8	X8	X8	X8	X8
64C**	Audio Intercom System	X	X1	X1	X1	X1	X1	X1
65D**	TCAS II System	X	X9	X9	X9	X9	X9	X9
65E**	Mode S Transponder	X	X10	X10	X10	X10	X10	X10
71E**	EGI	X	X	X	X	X	X	X
71E**	Radar Altimeter	X11			X3			X3
71E**	Stability Augmentation System	X		X	X3/9		X3/9	X3/9
71F**	VOR/ILS/DME Radio Navigation	X	X	X	X	X	X	X

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**CNT**	**FOR**	**LOL**	**NT**	**AAC**	**ASC**
91***	Emergency/Personnel Equipment	X	X1	X1	X1	X1	X1	X1
97***	Egress System	X	X1	X1	X1	X1	X1	X1

Legend:

CNT Contact Sorties, including advanced handling characteristics
FOR Formation Sorties
LOL Low-Level Navigation Sorties
NT Instrument, Navigation, Transition, and Cross-Country Training
AAC Air-to-Air, Conventional
ASC Air-to-Surface, Conventional

NOTES:

1. Restricted to solo only with rear cockpit discrepancies that do not affect safety of flight, including rear canopy visual distortion, discoloration, or crazing within technical order limits (rated pilot decision) and inoperative intercom. Air-conditioning in manual mode required.
2. Restricted to local and rated pilot for first flight when an engine is replaced with a non-FCF engine (SUPT only). Aircraft with engines requiring special oil analysis surveillance and/or sampling are restricted to local missions.
3. Not required for cross-country returns.
4. As required by AFI 11-202, Volume 3, MAJCOM supplements, and local operating procedures.
5. Required for night sorties.
6. Restricted to dual day local VMC or solo with a rated pilot for compass swing due.
7. AOA indexer not required for aircraft during FCF or being input to/returning from program depot maintenance or contract field team repair facilities.
8. VHF or UHF required for cross-country returns.
9. As required by AFIs, MAJCOM supplements, and local operating procedures.
10. Restricted to day local pattern only missions with local air traffic control approval.
11. Radar altimeter will not work if baggage pod is attached.

Attachment 37 (Added-AETC)

IC 2001-1

IC 2001-1 TO AFI 21-103/AETC SUP 1, *EQUIPMENT INVENTORY, STATUS, AND UTILIZATION REPORTING*

30 NOVEMBER 2001

SUMMARY OF REVISIONS

This revision incorporates interim change (IC) 2001-1 which adds **Attachment 35 (Added)**, T-6 Mission Essential Subsystem List (MESL), and **Attachment 36 (Added)**, T-38C Mission Essential Subsystem List (MESL). See the last attachment of this publication (IC 2001-1) for the complete IC. A H indicates revision from the previous edition.

2.25.8. (Added) Minimum Essential Subsystems Lists (MESL) for AETC-assigned aircraft are specified in **Attachment 19 (Added)** through **Attachment 36 (Added)**. Operating restrictions specified in AETCI 21-101, *Maintenance Management of Aerospace Equipment,* and aircraft technical orders take precedence when determining acceptability for flight. Minimum requirements for a functional check flight (FCF) are determined by the profile required and the FCF pilot. One-time flight procedures are specified in 00-20-series technical orders.

9.20. (Added) Forms Adopted. DD Forms 1149 and 1348-1a; AF Forms 126, 1297, 2426, 2691, and 2692; AFTO Form 92; and AETC Form 138.

Attachment 35 (Added-AETC)

T-6 MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)									
			DCF	NCF	DIT	NIT	DFT	NFT	DLA	NLA	DHA	NHA
11***	Airframe	X	X	X	X	X	X	X	X	X	X	X
11E**	Windshield and Canopy	X	X1	X1	X1	X1	X1	X1	X1	X1	X1	X1
12***	Cockpit	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
13***	Landing Gear	X	X	X	X	X	X	X	X	X	X	X
13E**	Brakes	X	X3	X3	X3	X3	X3	X3	X3	X3	X3	X3
14***	Flight Controls	X	X4	X4	X4	X4	X4	X4	X4	X4	X4	X4
22***	Power Plant	X	X5	X5	X5	X5	X5	X5	X5	X5	X5	X5
33***	Propeller	X	X	X	X	X	X	X	X	X	X	X
41***	Air-Conditioning and Pressurization	X	X6	X6	X6	X6	X6	X6	X6	X6	X6	X6
42***	Electrical Power	X	X	X	X	X	X	X	X	X	X	X
44AA*	Cockpit Lights	X		X2		X2		X2		X2		X2
44AAA	Warning Lights	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
44BA*	External Lighting	X	X7	X7	X7	X7	X7	X7	X7	X7	X7	X7
44BBB	Landing/Taxi Lights	X	X8	X8	X8	X8	X8	X8	X8	X8	X8	X8
45***	Hydraulic	X	X	X	X	X	X	X	X	X	X	X
46***	Fuel	X	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2	X9/2
47***	Oxygen	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
49A**	Fire Detection System	X	X	X	X	X	X	X	X	X	X	X
51A**	Panels and Multipurpose Components (Flight Instruments)	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
51AD*	Stall Warning System (Angle of Attack)	X	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10	X2/10
51BA*	Independent Instrumentation (Standby Instruments)	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
51BAD	Clock	X			X11	X11			X11	X11	X11	X11
51BAE	Accelerometer	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
57AA*	Attitude/Heading Reference System (AHRS)	X	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12	X2/12
57AB*	Electronic Flight Instrument System (EFIS)	X	X2	X2	X2	X2	X2	X2	X2	X2	X2	X2
57AC*	Integrated Automatic Tuning	X	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13	X2/13
62A**	VHF Communication	X	X	X	X	X	X	X	X	X	X	X
63A**	UHF Communication	X	X14	X14	X14	X14	X14	X14	X14	X14	X14	X14
64A**	Interphone System	X	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15	X2/15
65A**	Transponder	X	X16	X16	X16	X16	X16	X16	X16	X16	X16	X16

WUC	System/Subsystem	Full System List (FSL)	Basic System List (BSL) (see legend below)									
			DCF	NCF	DIT	NIT	DFT	NFT	DLA	NLA	DHA	NHA
71A**	VHF Navigation	X	X17	X	X17	X	X17	X	X17	X	X17	X
71BA*	GPS	X		X18	X18	X18		X18	X18	X18	X18	X18
91***	Emergency Equipment	X	X	X	X	X	X	X	X	X	X	X
97***	Explosive Devices	X	X	X	X	X	X	X	X	X	X	X

Legend:

DCF Day Contact Familiarization
NCF Night Contact Familiarization
DIT Day Instrument
NIT Night Instrument
DFT Day Formation
NFT Night Formation
DLA Day Low-Altitude Navigation
NLA Night Low-Altitude Navigation
DHA Day High-Altitude Navigation
NHA Night High-Altitude Navigation

NOTES:

1. Aircraft with canopy or windscreen distorted/crazed within T.O. limits are restricted to day dual local visual meteorological conditions (VMC) and no formation flights (Rated pilot decision).
2. Aircraft may be flown solo with discrepancies in rear cockpit that do not affect safety of flight.
3. Restricted to dual day local, dual local instrument meteorological conditions (IMC), or solo with a rated pilot for first flight when brake system has been bled due to component removal, replacement, or installation (JPPT only).
4. Trim aid device not a required subsystem. Failure does not impact flight safety.
5. Aircraft with engines that require special oil analysis surveillance and or sampling are restricted to local missions. Restricted to ferry flight, in manual mode, by rated pilot.
6. Air-conditioning manual mode required if auto mode is inoperative.
7. Wing and taillights not required for day flights. However, if a day flight takeoff extends into a night flight, lights will be operational before takeoff.
8. Either landing or taxi light must be operational, restricted to day local VMC (dual or solo). Continued flight with one bulb inoperative allowable.
9. Restricted to rated pilot if fuel auto balance system is inoperative. Single point refueling not required.
10. Restricted to flight by rated pilot.
11. One clock must be operational in each cockpit.

12. For a standby magnetic compass swing required by maintenance, the aircraft is restricted to dual day local VMC or solo with a rated pilot.
13. Fault Code and side channel discrepancies allowable if it does not affect system operation.
14. May be inoperative if the VHF communication system is operational. Required for student solo.
15. Ground crew amplifier not required.
16. Restricted to day local VMC for home field pattern only missions with local air traffic control approval.
17. Restricted to day local VMC.
18. May be inoperative if not needed for syllabus training.

Attachment 36 (Added-AETC)

T-38C MISSION ESSENTIAL SUBSYSTEM LIST (MESL)

NOTE: Numbers in columns refer to notes below.

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**CNT**	**FOR**	**LOL**	**NT**	**AAC**	**ASC**
11***	Airframe	X	X	X	X	X	X	X
11***	Windshield/Canopy	X	X1	X1	X1	X1	X1	X1
121**	Cockpit and Controls	X	X1	X1	X1	X1	X1	X1
13***	Landing Gear and Brakes	X	X	X	X	X	X	X
14***	Flight Controls	X	X	X	X	X	X	X
23***	Turbojet Power Plant/Gearboxes	X	X2	X2	X2	X2	X2	X2
23KDU	Electronic Engine Display	X	X3	X3	X3	X3	X3	X3
41***	Air-Conditioning, Pressurization, and Anti-Ice Control	X	X1	X1	X1	X1	X1	X1
42***	Electrical System	X	X	X	X	X	X	X
4411*	Exterior Lights	X	X4	X4	X4	X4	X4	X4
442**	Interior Lights	X	X1/5	X1/5		X1/5		
45***	Hydraulic and Pneumatic Power	X	X1	X1	X1	X1	X1	X1
46***	Fuel System	X	X	X	X	X	X	X
47***	Oxygen System	X	X1	X1	X1	X1	X1	X1
49***	Miscellaneous Utilities (Fire Detection)	X	X	X	X	X	X	X
51***	Standby Instruments	X6	X1	X1	X1	X1	X1	X1
5112*	Air Data Computer/TAT Probe	X	X	X	X	X	X	X
51241	Mission and Data Processor	X	X	X	X	X	X	X
51243	Head-Up Display	X	X3	X3	X3	X3	X3	X3
51247	Up-Front Control Panel	X	X1	X1	X1	X1	X1	X1
51248	Multifunction Display	X	X1	X1	X1	X1	X1	X1
513**	Angle of Attack (AOA)	X7	X3	X3	X3	X3	X3	X3
55A**	Camera System	X					X	X
55C**	Data Transfer System	X	X3	X3	X3	X3	X3	X3
62A**	VHF Radio System	X	X8	X8	X8	X8	X8	X8
63D**	UHF Radio System	X	X8	X8	X8	X8	X8	X8
64C**	Audio Intercom System	X	X1	X1	X1	X1	X1	X1
65D**	TCAS II System	X	X9	X9	X9	X9	X9	X9
65E**	Mode S Transponder	X	X10	X10	X10	X10	X10	X10
71E**	EGI	X	X	X	X	X	X	X
71E**	Radar Altimeter	X11			X3			X3
71E**	Stability Augmentation System	X		X	X3/9		X3/9	X3/9
71F**	VOR/ILS/DME Radio Navigation	X	X	X	X	X	X	X

		Full System List (FSL)	Basic System List (BSL) (see legend below)					
WUC	**System/Subsystem**		**CNT**	**FOR**	**LOL**	**NT**	**AAC**	**ASC**
91***	Emergency/Personnel Equipment	X	X1	X1	X1	X1	X1	X1
97***	Egress System	X	X1	X1	X1	X1	X1	X1

Legend:

CNT Contact Sorties, including advanced handling characteristics
FOR Formation Sorties
LOL Low-Level Navigation Sorties
NT Instrument, Navigation, Transition, and Cross-Country Training
AAC Air-to-Air, Conventional
ASC Air-to-Surface, Conventional

NOTES:

1. Restricted to solo only with rear cockpit discrepancies that do not affect safety of flight, including rear canopy visual distortion, discoloration, or crazing within technical order limits (rated pilot decision) and inoperative intercom. Air-conditioning in manual mode required.
2. Restricted to local and rated pilot for first flight when an engine is replaced with a non-FCF engine (SUPT only). Aircraft with engines requiring special oil analysis surveillance and/or sampling are restricted to local missions.
3. Not required for cross-country returns.
4. As required by AFI 11-202, Volume 3, MAJCOM supplements, and local operating procedures.
5. Required for night sorties.
6. Restricted to dual day local VMC or solo with a rated pilot for compass swing due.
7. AOA indexer not required for aircraft during FCF or being input to/returning from program depot maintenance or contract field team repair facilities.
8. VHF or UHF required for cross-country returns.
9. As required by AFIs, MAJCOM supplements, and local operating procedures.
10. Restricted to day local pattern only missions with local air traffic control approval.
11. Radar altimeter will not work if baggage pod is attached.